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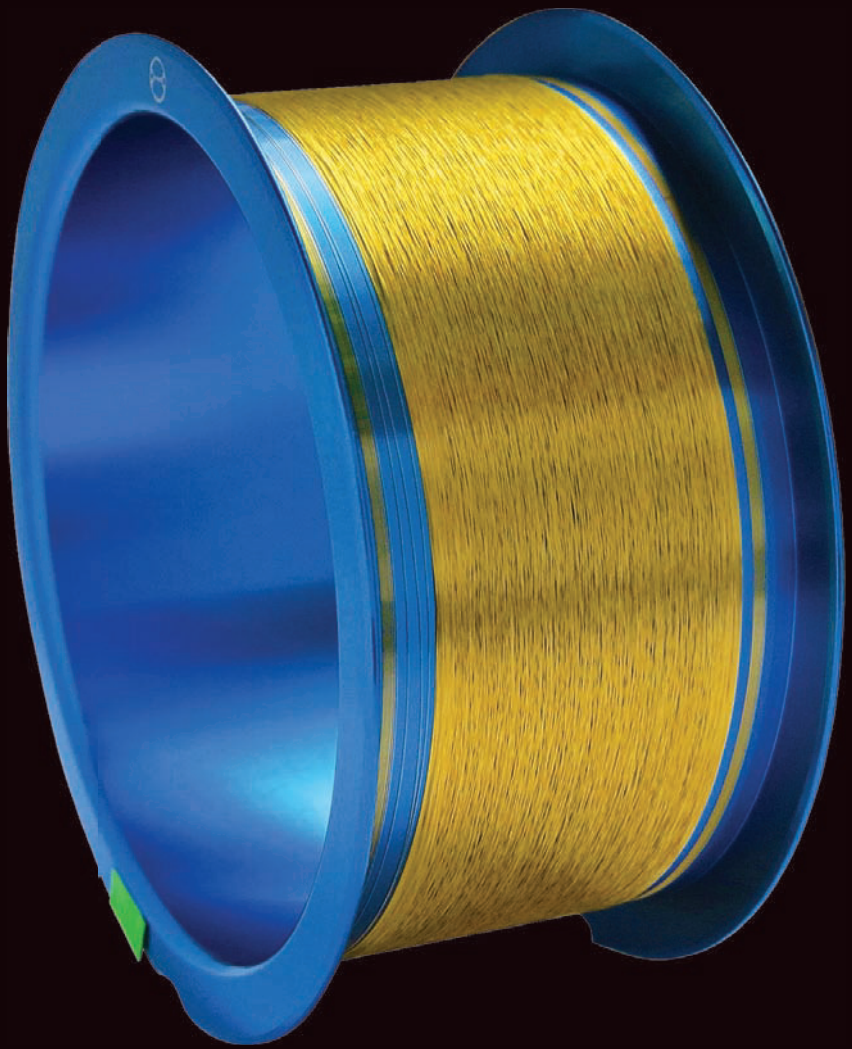
BONDING WIRE



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Product Guide 2025 - E

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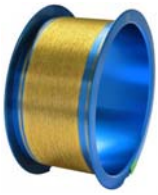
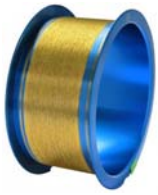
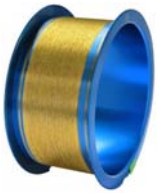


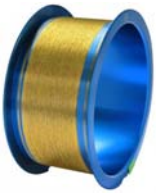
GSA Type
Gold Au (4N)
Bonding Wire
Page 4~5



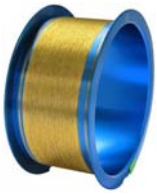
GLD-H Type
Gold Au (4N)
High Performance Wedge
Page 6~7



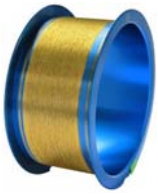
GLF Type
Gold Au (4N)
Super Low Loop
Page 8~9



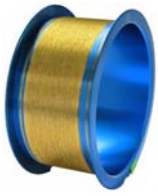
GMH-2 Type
High Strength (4N)
Bonding Wire
Page 10~11



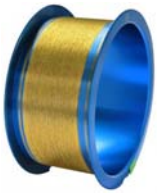
GPG-2 Type
High Reliability (2N)
Bonding Wire
Page 12~13



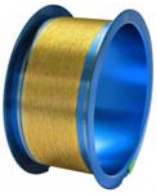
GPH Type
High Reliability (2N)
Bonding Wire
Page 14~15



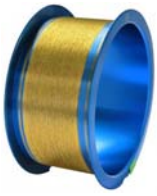
M3 (4N)
Manual Bonder Au
Bonding Wire
Page 16~17



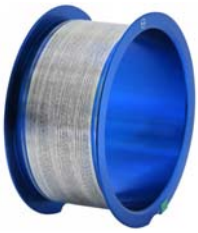
GBC (2N)
Gold Au
Bumping Wire
Page 18~19



GBE (4N)
Gold Au
Bumping Wire
Page 20~21

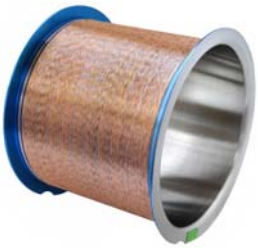


Y Type(4N)
Heavy Power Gold
Bonding Wire
Page 22~23

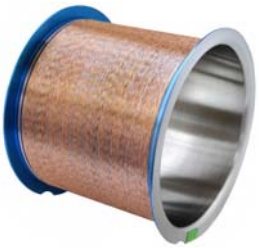


SEA Type
Silver Ag
Bonding Wire
Page 24~25

CLR-1AT Type PCC
Palladium Coated
Copper Wire
Page 26~27

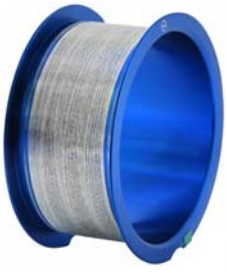


CA-1 Type
Copper Alloy
Bonding Wire
Page 28~29



CFB-1 Type
Bare Copper
Bonding Wire
Page 30~31

CP-1 Type
Heavy Copper
Power Bonding Wire
Page 32~33



TABN Type
Aluminum Al-1% Si
Bonding Wire
Page 34~35

TANW Type
Large Aluminum Al
Power Bonding Wire
Page 36~39

Ribbon

TABR Type
Aluminum Al Ribbon
Flat Bonding Wire
Page 40~41

Ribbon

AuR Type
Gold Au Ribbon
Flat Bonding Wire
Page 42~43

Contact: info@TopLine.tv
Tel 1-800-776-9888

About TopLine:

TopLine sells bonding wire made by Tanaka to universities, microelectronic labs and small volume users. Easy to order. Need just one spool? - Contact us today.

About Tanaka:

Tanaka is the world's premier manufacturer of bonding wire to the semiconductor industry. Tanaka offers a full range of Gold (Au), Silver (Ag), Aluminum (Al), bare Copper (Cu) and Palladium Coated Copper (PCC) covering all applications of wedge, ball and bump bonding.

Ag Silver Alloy Wire (p24~25)

Silver (Ag) alloy wire offers reduced cost compared to gold. High reflectivity in short wavelength range. Diameter 15um to 30um. Contact TopLine for special needs.

Cu Copper Alloy Wire (p32~33)

High reliability copper alloy bonding wire provides wider second bond process window and lower resistivity than bare copper. Softer FAB and higher bond reliability after aging 2000 hours. Stable bonding with Forming Gas 95/5.

Al-1% Si - Aluminum Wire (p38~39)

Small diameter Al-1% Si wire in diameters ranging from 18um to 80um. Good corrosion resistance. Uniform distribution of Si and stable mechanical properties.

Ribbon Wire (p42~45)

Flat aluminum (Al) and Gold (Au) is available for power device applications. Excellent corrosion resistance and satisfactory surface smoothness.

Start-End Spool (p46)

Green tape indicates start of spool. Red tape is the end.

Au Gold Wire (p4~23)

4N gold bonding wire in a range of diameters from 15um to 50um. Many specialty applications including stable stitch, fine-pitch, super low loop and high reliability applications. Also 2N Au alloy and 4N Au bumping wire. Special Type is available for high performance wedge bonding.

PCC - Pd Coated Copper (p26~27)

Palladium coated Cu wire (PCC) is easier to bond than bare copper wire. The palladium (Pd) coating provides high performance and stable bonding with a wide process window. Wire bonding equipment requires grounding. Diameter 15um~50um. N2 or Forming Gas 95/5.

Cu Pure Bare Copper Wire (p34~35)

Provides stable wire bonding performance due to preeminent Tanaka quality control system and wire manufacturing experience. Excellent stitch bond-ability and wide bonding parameter window. Stable continuous bond-ability.

Al Power Aluminum Wire (p40~41)

Large diameter aluminum (Al) wire for high power applications. Diameters range from 100um to 600um. Contact us for special needs.

Technical Support:

Contact TopLine for technical support and questions for applications involving special needs. We look forward to assisting you. Email Tanaka@TopLine.tv
Or call 1-800-776-9888

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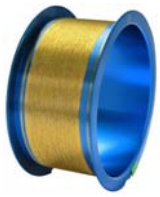
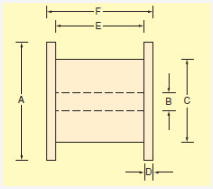
GSA Type
Gold 4N (Au)
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	HAZ Length	Length Meters	Length Feet	Part Number	Order Nr
Ø 12.5µm (Ø 0.5 mil)	1.7~3.5 gf	17~34 mN	1.0~6.0%	120~180µm	**100m 200m**	**300ft 600ft**	**GSA-12.5A100 GSA-12.5A200**	**300121 300122**
Ø 15µm (Ø 0.6 mil)	2.5~5.3 gf	25~52 mN	1.0~6.0%	130~200µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-15A100 GSA-15A300 GSA-15A500**	**300151 300153 300155**
Ø 18µm (Ø 0.7 mil)	3.6~7.6 gf	35~75 mN	1.0~6.0%	150~210µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-18A100 GSA-18A300 GSA-18A500**	**300181 300183 300185**
Ø 20µm (Ø 0.8 mil)	4.5~9.4 gf	44~92 mN	1.0~7.0%	150~220µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-20A100 GSA-20A300 GSA-20A500**	**300201 300203 300205**
Ø 25µm (Ø 1.0 mil)	7.0~14.7 gf	69~144 mN	1.0~7.0%	160~240µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-25A100 GSA-25A300 GSA-25A500**	**300251 300253 300255**
Ø 30µm (Ø 1.2 mil)	10.0~21.2 gf	98~208 mN	1.5~8.5%	170~270µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-30A100 GSA-30A300 GSA-30A500**	**300301 300303 300305**
Ø 32µm (Ø 1.25 mil)	11.4~24.1 gf	112~236 mN	1.5~8.5%	170~280µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-32A100 GSA-32A300 GSA-32A500**	**300321 300323 300325**
Ø 33µm (Ø 1.3 mil)	12.1~25.6 gf	119~251 mN	1.5~8.5%	170~280µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-33A100 GSA-33A300 GSA-33A500**	**300331 300333 300335**
Ø 38µm (Ø 1.5 mil)	16.0~33.8 gf	157~331 mN	1.5~8.5%	180~300µm	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GSA-38A100 GSA-38A300 GSA-38A500**	**300381 300383 300385**
Ø 50µm (Ø 2.0mil)	27.9~58.8 gf	274~577 mN	1.5~8.5%	200~340µm	**100m 300m**	**300ft 1000ft**	**GSA-50A100 GSA-50A300**	**300501 300503**
Ø 75µm (Ø 3.0mil)	62.9~132.9 gf	620~1311 mN	1.5~8.5%	N/A	**100m**	**300ft**	**GSA-75N100**	**300751**

Spool Information

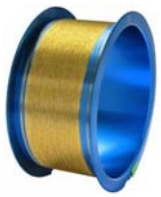
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	**A**
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2 WNI Conductive	**C**
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4 WNI Conductive	**N**

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape.
Note 3: End wire on spool with Red tape.

INFO

Note 1: Stable stitch bond on PPF (NiPdAu) QFN at 175°C , QFP and BGA Packages.
Note 2: Good 2nd bond stitch remaining after pull test. Good squashed ball shape and excellent FAB softness.
Note 3: Standard Tolerance: Ø12.5um~38um ±1 um , Ø50um ±2 um Ø60um~80um ±3 um
Note 4: Diameter: 12.5µm , 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm, 33µm, 38µm , 50µm , 75µm

GSA Type
How to Order



Part Number System

GSA	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **GSA** = Stable Stitch Order# 300XXX **GSB** = Stronger 2nd bond Order# 336XXX		**Code** **Mil** **12.5** 0.5mil **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.3mil **38** 1.5mil **50** 2.0mil **62.5** 2.5mil **65** 2.5mil **75** 3.0mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (B) **2500** 8000ft (B) Meters controlling dimension

.

Order Number

3	0	0	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **0** = GSA Special Order **336** = GSB	**µm** **Mil** **12.5** 0.5mil **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.3mil **38** 1.5mil **50** 2.0mil **62.5** 2.5mil **65** 2.5mil **75** 3.0mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) Meters controlling

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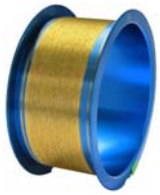
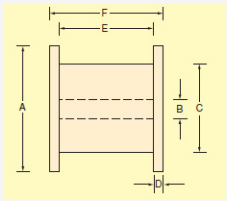
GLD-H Type
High Performance
Wedge Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 12.5µm (Ø 0.5 mil)	2.4 gf Min	23 mN Min	3.5% max	**100m 200m**	**300ft 600ft**	**GLD-H-12.5A100 GLD-H-12.5A200**	**309121 309122**
Ø 15µm (Ø 0.6 mil)	3.5 gf Min	34 mN Min	3.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-15A100 GLD-H-15A300**	**309151 309153**
Ø 18µm (Ø 0.7 mil)	4.0 gf Min	39 mN Min	3.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-18A100 GLD-H-18A300**	**309181 309183**
Ø 20µm (Ø 0.8 mil)	6.0 gf Min	59 mN Min	3.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-20A100 GLD-H-20A300**	**309201 309203**
Ø 25µm (Ø 1.0 mil)	16 gf Min	156 mN Min	3.5% max	**100m 300m 500m**	**150ft 300ft 1000ft**	**GLD-H-25A100 GLD-H-25A300 GLD-H-25A500**	**309251 309253 309255**
Ø 30µm (Ø 1.2 mil)	20 gf Min	196 mN Min	3.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-30A100 GLD-H-30A300**	**309301 309303**
Ø 32µm (Ø 1.25 mil)	23 gf Min	225 mN Min	3.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-32A100 GLD-H-32A300**	**309321 309323**
Ø 35µm (Ø 1.4 mil)	27 gf Min	264mN Min	4.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-35A100 GLD-H-35A300**	**309351 309353**
Ø 50µm (Ø 2.0 mil)	45 gf Min	441 mN Min	4.5% max	**100m 300m**	**300ft 1000ft**	**GLD-H-50A100 GLD-H-50A300**	**309501 309503**

Spool Information

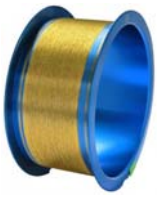
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2 WNI Conductive	**C**
	17.4mm	12.7mm	13.5mm	0.40mm	18.3mm	19.1mm	HALF-INCH Rewind Service By TopLine	H

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: For wedge to wedge applications that require maximum 3.5% elongation with Ø18~30um
Note 2: Excellent breaking load for wedge bonding applications.
Note 3: Standard Tolerance: Ø12.5um~38um ±1 um , Ø50um ±2 um
Note 4: Diameter: 12.5µm , 15µm , 18µm , 20µm , 23µm 25µm , 28µm , 30µm , 32µm , 33µm , 35µm , 50µm
Note 5: Half-inch rewind spooling service available from TopLine. See www.topline.tv/Tanaka_Half_Inch.html

GLD-H Type
High Performance
Wedge Bonding Wire



Part Number System

GLD-H	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **GLD-H** = High Performance Wedge Bonding Wire Order# 309XXX **GLD-** =Standard Wedge Bonding Wire Order# 349XXX		**Code** **Mil** **12.5** 0.5mil **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **50** 2.0mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI) **Half-inch Spool Rewind Service By TopLine** **H** = 1/2" AL-1/2	**100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) **Half-Inch Rewind Service By TopLine** **Meters** **Feet** **Spool** **10** 33ft (H) **25** 75ft (H) **50** 150ft (H) Meters controlling dimension

Order Number

3	0	9	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Type GLD-H **4** = Type GLD Standard Wire	**Gold Wire (Au)** **9** = GLD-H **9** = GLD	**µm** **Mil** **12.5** 0.5mil **15** 0.6mil **18** 0.7mil **20** 0.8mil **25** 1.0mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **50** 2.0mil	**2-Inch Spool** **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **Half-inch Spool Rewind Service By TopLine** Code Meters Feet **8** = 10m (33ft) **9** = 25m (75ft) **0** = 50m (150ft) Meters controlling

TopLine®
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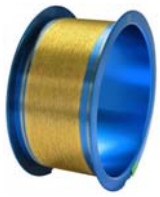
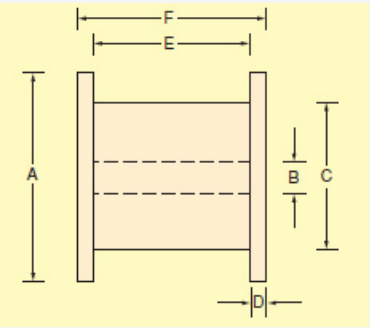
Tel 1-800-776-9888

GLF Type
Super Low Loop
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Loop Height	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	3.1~5.9 gf	30~58 mN	2.0~6.0%	> 30um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-15A100 GLF-15A300 GLF-15A500**	**307151 307153 307155**
Ø 18µm (Ø 0.7 mil)	4.5~8.5 gf	44~83 mN	2.0~6.0%	> 36um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-18A300 GLF-18A300 GLF-18A500**	**307181 307183 307185**
Ø 20µm (Ø 0.8 mil)	5.6~10.5 gf	55~103 mN	2.0~7 .0%	> 40um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-20A100 GLF-20A300 GLF-20A500**	**307201 307203 307205**
Ø 25µm (Ø 1.0 mil)	8.7~16.4 gf	85~161 mN	2.0~7.0%	>50um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-25A100 GLF-25A300 GLF-25A500**	**307251 307253 307255**
Ø 30µm (Ø 1.2 mil)	12.5~23.7gf	123~232 mN	2.0~9.0%	> 60um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-30A100 GLF-30A300 GLF-30A500**	**307301 307303 307305**
Ø 38µm (Ø 1.5 mil)	20.1~38.0gf	1197~372 mN	2.0~9.0%	100~220um	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GLF-38A100 GLF-38A300 GLF-38A500**	**307381 307383 307385**

Spool Information

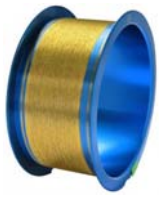
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape.
Note 3: End wire on spool with Red tape.

INFO

Note 1: For lower loop height applications than conventional low loop wires.
Note 2: 70um average using Shinkawa UTC-200 ball bonder.
Note 3: Higher pull load than conventional low loop wires. Less damage in neck. Suppression of snake-wire.
Note 4: Standard Tolerance: Ø15um~30um ±1 um
Note 5: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm, 32um, 35um, 38um

GLF Type
Super Low Loop
How to Order



Part Number System

GLF	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **GLF** = Super Low Loop Bonding Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNi) **N** = 2"x2" AL-4(WNi)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	7	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **7** =GLF	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) Meters controlling

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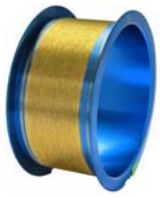
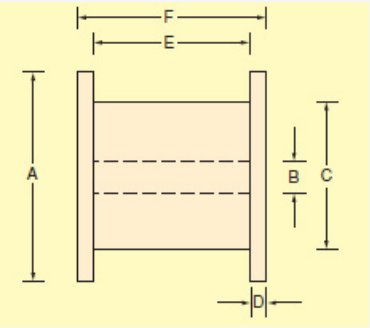
GMH-2 Type
High Tensile Strength
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	3.7~6.5 gf	36~64 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-15A100 GMH2-15A300 GMH2-15A500**	**302151 302153 302155**
Ø 18µm (Ø 0.7 mil)	5.4~9.4 gf	53~92 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-18A300 GMH2-18A300 GMH2-18A500**	**302181 302183 302185**
Ø 20µm (Ø 0.8 mil)	6.7~11.6 gf	66~99 mN	1.0~7 .0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-20A100 GMH2-20A300 GMH2-20A500**	**302201 302203 302205**
Ø 25µm (Ø 1.0 mil)	10.4~18.1 gf	102~178 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-25A100 GMH2-25A300 GMH2-25A500**	**302251 302253 302255**
Ø 30µm (Ø 1.2 mil)	15.0~26.1gf	147~256 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-30A100 GMH2-30A300 GMH2-30A500**	**302301 302303 302305**
Ø 32µm (Ø 1.25 mil)	17.0~29.7gf	166~291 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-32A100 GMH2-32A300 GMH2-32A500**	**302321 302323 302325**
Ø 38µm (Ø 1.50 mil)	24.0~41.9gf	235~410 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GMH2-38A100 GMH2-38A300 GMH2-38A500**	**302381 302383 302385**

Spool Information

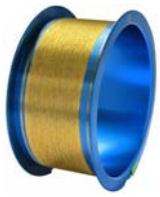
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape.
Note 3: End wire on spool with Red tape.

INFO

Note 1: High tensile strength for multiple loop profiles used in BGA packages.
Note 2: Excellent bump formation for stack die packages.
Note 3: Standard Tolerance: Ø15um~30um ±1 um
Note 4: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm

GMH-2 Type
High Tensile Strength
How to Order



Part Number System

GMH2	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **GMH2** = Super High Tensile Strength Bonding Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.3mil **35** 1.4mil **38** 1.5mil **50** 2.0mi	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	2	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **2** =GMH-2	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.30mil **35** 1.40mil **38** 1.50mil **50** 2.00mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) Meters controlling

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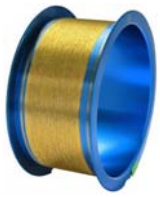
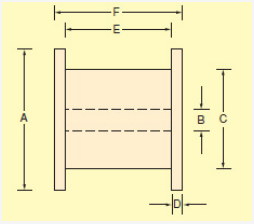
GPG-2 Type
High Reliability
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	3.5~6.3 gf	34~62 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-15A100 GPG2-15A300 GPG2-15A500**	**304151 304153 304155**
Ø 18µm (Ø 0.7 mil)	5.0~9.0 gf	49~88 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-18A100 GPG2-18A300 GPG2-18A500**	**304181 304183 304185**
Ø 20µm (Ø 0.8 mil)	6.2~11.1 gf	61~109 mN	1.0~7 .0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-20A100 GPG2-20A300 GPG2-20A500**	**304201 304203 304205**
Ø 25µm (Ø 1.0 mil)	9.7~17.4 gf	95~171 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-25A100 GPG2-25A300 GPG2-25A500**	**304251 304253 304255**
Ø 30µm (Ø 1.2 mil)	13.9~25.1gf	123~232 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-30A100 GPG2-30A300 GPG2-30A500**	**304301 304303 304305**
Ø 32µm (Ø 1.25 mil)	15.8~28.5gf	155~279 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-32A100 GPG2-32A300 GPG2-32A500**	**304321 304323 304325**
Ø 33µm (Ø 1.3 mil)	16.8~30.3gf	164~297 mN	2.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-33A100 GPG2-33A300 GPG2-33A500**	**304331 304333 304335**
Ø 35µm (Ø 1.4 mil)	19.0~34.1gf	186~334 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-35A100 GPG2-35A300 GPG2-35A500**	**304351 304353 304355**
Ø 38µm (Ø 1.5 mil)	22.3~40.2gf	219~394 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPG2-38A100 GPG2-38A300 GPG2-38A500**	**304381 304383 304385**

Spool Information

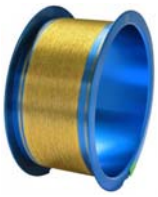
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Gold Alloy 2N (Au99% - Pd 1%)
Note 2: High bond reliability and good match for mold compound with halogen.
Note 3: Good squashed ball.
Note 4: Standard Tolerance: ∅15um~30um ±1 um
Note 5: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32um , 33µm , 38um

GPG-2 Type
High Reliability Bonding
How to Order



Part Number System

GPG2	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 2N (Au99-Pd1) **GPG-2** = Super High Reliability Bonding Wire Other Models GPG GPG-3		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	4	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **4** =GPG-2 Other Models **35** = GPG **41** =GPG-3	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.3mil **35** 1.4mil **38** 1.5mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) Meters controlling

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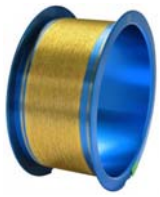
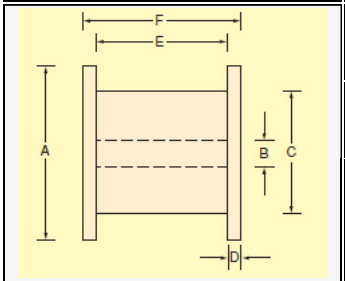
GPH Type
High Reliability
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	3.3~6.1 gf	32~60 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-15A100 GPH-15A300 GPH-15A500**	**308151 308153 308155**
Ø 18µm (Ø 0.7 mil)	4.8~8.8 gf	47~86 mN	1.0~7.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-18A100 GPH-18A300 GPH-18A500**	**308181 308183 308185**
Ø 20µm (Ø 0.8 mil)	5.9~10.8 gf	58~106 mN	1.0~7 .0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-20A100 GPH-20A300 GPH-20A500**	**308201 308203 308205**
Ø 25µm (Ø 1.0 mil)	9.2~16.9 gf	90~166 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-25A100 GPH-25A300 GPH-25A500**	**308251 308253 308255**
Ø 30µm (Ø 1.2 mil)	13.2~24.4gf	129~239 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-30A100 GPH-30A300 GPH-30A500**	**308301 308303 308305**
Ø 32µm (Ø 1.25 mil)	15.1~27.7gf	148~272 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-32A100 GPH-32A300 GPH-32A500**	**308321 308323 308325**
Ø 35µm (Ø 1.4 mil)	18.0~33.2gf	177~326 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-35A100 GPH-35A300 GPH-35A500**	**308351 308353 308355**
Ø 38µm (Ø 1.5 mil)	21.2~39.1gf	208~383 mN	2.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GPH-38A100 GPH-38A300 GPH-38A500**	**308381 308383 308385**

Spool Information

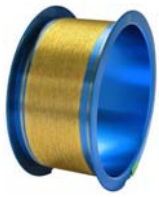
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Gold Alloy 2N (Au99%-X-Rich)
Note 2: Higher bond reliability and good character for halogen free mold compound.
Note 3: Good squashed ball.
Note 4: Standard Tolerance: Ø15um~30um ±1 um
Note 5: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm , 33µm , 35µm , 38µm

GPH Type
High Reliability Bonding
How to Order



Part Number System

GPH	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 2N (Au99-x) **GPH**= High Reliability Bonding Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	8	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **8** =GPH	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) Meters controlling

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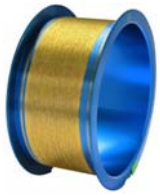
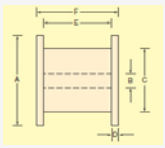
M3 Type
Gold 4N (Au)
Manual Bonder Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 12.5µm (Ø 0.5 mil)	1.4 gf Min	14 mN Min	1.0~6.0%	**100m 200m**	**300ft 600ft**	**M3-12.5A100 M3-12.5A200**	**303121 303122**
Ø 15µm (Ø 0.6 mil)	2.0 gf Min	19.6 mN Min	1.0~6.0%	**100m 300m**	**300ft 1000ft**	**M3-15A100 M3-15A300**	**303151 303153**
Ø 18µm (Ø 0.7 mil)	4.6~7.1 gf	44~73 mN	12.0~6.0%	**100m 300m**	**300ft 1000ft**	**M3-18A100 M3-18A300**	**303181 303183**
Ø 20µm (Ø 0.8 mil)	5.7~8.8 gf	56~86 mN	2.0~6.0%	**100m 300m**	**300ft 1000ft**	**M3-20A100 M3-20A300**	**303201 303203**
Ø 25µm (Ø 1.0 mil)	8.9~13.8 gf	87~135 mN	2.0~7.0%	**100m 300m**	**300ft 1000ft**	**M3-25A100 M3-25A300**	**303251 303253**
Ø 30µm (Ø 1.2 mil)	12.9~19.8 gf	127~194 mN	2.0~9.0%	**100m 300m**	**300ft 1000ft**	**M3-30A100 M3-30A300**	**303301 303303**
Ø 32µm (Ø 1.25 mil)	14.7~22.6 gf	144~222 mN	2.0~9.0%	**100m 300m**	**300ft 1000ft**	**M3-32A100 M3-32A300**	**303321 303323**
Ø 33µm (Ø 1.3 mil)	15.6~24.0 gf	153~235 mN	2.0~9.0%	**100m 300m**	**300ft 1000ft**	**M3-33A100 M3-33A300**	**303331 303333**
Ø 35µm (Ø 1.4 mil)	17.5~27.0 gf	172~265 mN	3.0~9.0%	**100m 300m**	**300ft 1000ft**	**M3-35A100 M3-35A300**	**303351 303353**
Ø 38µm (Ø 1.5 mil)	20.7~31.8 gf	203~312 mN	4.0~12.0%	**100m 300m**	**300ft 1000ft**	**M3-38A100 M3-38A300**	**303381 303383**
Ø 50µm (Ø 2.0 mil)	35.8~55.1 gf	351~541 mN	4.0~15.0%	**100m 300m**	**300ft 1000ft**	**M3-50A100 M3-50A300**	**303501 303503**

Spool Information

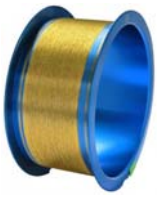
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N
	17.4mm	12.7mm	13.5mm	0.40mm	18.3mm	19.1mm	HALF-INCH Rewind Service By TopLine	H

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Bold wire for ball and wedge bonding on manual bonder.
Note 2: Good 2nd bond stitch remaining after pull test. Good squashed ball shape.
Note 3: Standard Tolerance: Ø12.5um~38um ±1 um , Ø50um ±2 um
Note 4: Wire Diameter available: 12.5um , 15um,18um, 20µm, 25µm , 30µm , 32µm , 33µm ,35µm , 38µm , 50µm
Note 5: Half-inch rewind spooling service available from TopLine. See www.topline.tv/Tanaka_Half_Inch.html

M3 Type
How to Order



Part Number System

M3	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **M3** = Manual Bonders Gold Wire Bonding Wire		**Code** **Mil** **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **38** 1.5mil **50** 2.0mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI) **Rewind Service** **Half-Inch Spool** **H** = 1/2"x3/4" HALF	**100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) **Half-Inch** **Rewind Service** **By TopLine** **Meters** **Feet** **Spool** **25** 75ft (H) **50** 150ft (H) Meters controlling dimension

Order Number

3	0	3	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **3** = M3	**µm** **Mil** **12.5** 0.5mil **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **33** 1.3mil **35** 1.4mil **38** 1.5mil **50** 2.0mil	Code Meters Feet **2-Inch Spool** **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **Rewind Service** **By TopLine** **Half-Inch Spool** **9** = 25m (75ft) **0** = 50m (150ft) Meters controlling

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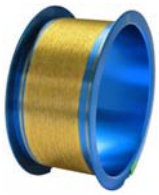
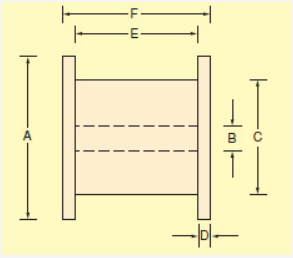
Tel 1-800-776-9888

GBC Type
Gold 2N (Au)
Bumping Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	>5.2 gf	>51 mN	1.5~4.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC-15A100 GBC-15A300 GBC-15A500**	**305151 305153 305155**
Ø 18µm (Ø 0.7 mil)	>8.2 gf	>80 mN	1.5~4.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC-18A100 GBC-18A300 GBC-18A500**	**305181 305183 305185**
Ø 20µm (Ø 0.8 mil)	>9.3 gf	>91 mN	1.5~4.0%	**100m 300m 500m**	**300m 1000ft 1500ft**	**GBC-20A100 GBC-20A300 GBC-20A500**	**305201 305203 305205**
Ø 25µm (Ø 1.0 mil)	>14.5 gf	>142 mN	1.5~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC-25A100 GBC-25A300 GBC-25A500**	**305251 305253 305255**
Ø 30µm (Ø 1.2 mil)	>20.9 gf	<205 mN	1.5~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC-30A100 GBC-30A300 GBC-30A500**	**305301 305303 305305**
Ø 32µm (Ø 1.25 mil)	>23.8 gf	>233 mN	1.5~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC32A100 GBC-32A300 GBC-32A500**	**305321 305323 305325**
Ø 35µm (Ø 1.4 mil)	>28.4 gf	>279 mN	1.5~6.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC32A100 GBC-32A300 GBC-32A500**	**305321 305323 305325**
Ø 38µm (Ø 1.5 mil)	>33.5 gf	>329 mN	1.5~6.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBC-38A100 GBC-38A300 GBC-38A500**	**305381 305383 305385**

Spool Information

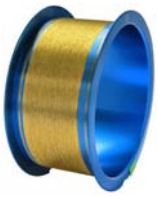
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4	B
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Use with bonder such as Shinkawa SBB-1 or equivalent.
Note 2: Minimal deviation of ball neck height after bumping with steady bump shape.
Note 3: Low deterioration of shear strength during aging test at 200°C.
Note 4: Standard Tolerance: Ø15um~38um ±1 um
Note 5: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm , 35µm , 38µm
Note 6: Made in Japan

GBC Type
How to Order



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Part Number System

GBC	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 2N (Au99-Pd1) **GBC** = Bumping Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	5	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au) 2N	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **5** = GBC	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **8** = 5000m (16000ft) **9** = other Meters controlling

Explanation of difference between Gold Bump Wire and Gold Bonding Wire.

Note	Feature	Bump Wire	Bonding Wire
1	Number of Bonds	One Bond Only To Die Pad or Substrate	Two Bonds From Die Pad to Package.
2	Purpose/Application	Single Au (gold) wire is squashed. Wire is then reflowed (melted) to form a bump for a flip chip.	Bonding from the die to the leadfame (or substrate) with a loop (wedge or stitch).
3	Repeatable Wire Break	Bumping wire is intended to break close to neck area of first bond.	Bonding wire has a longer HAZ (*heat affected zone*) to permit the wire to be kinked or looped and pan out for next bond (wedge or stitch)
4	Grain Structure	Dopants added for grain structure during annealing process to allow repeatable wire break after the stud bump formation to make wire softer for wire cut/break mode.	Grain structure in bonding wire enables formation of loop or kink.

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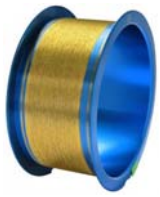
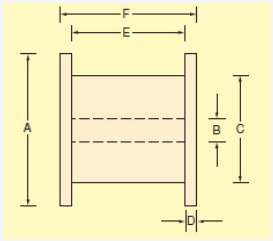
GBE Type
Gold 4N (Au)
Bumping Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 06 mil)	>4.5 gf	>44mN	1.5~4.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBE-15A100 GBE-15A300 GBE-15A500**	**301151 301153 301155**
Ø 18µm (Ø 0.7 mil)	>6.5 gf	>64mN	1.5~4.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBE-18A100 GBE-18A300 GBE-18A500**	**301181 301183 301185**
Ø 20µm (Ø 0.8 mil)	>8.0 gf	>78 mN	1.5~4.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBE-20A100 GBE-20A300 GBE-20A500**	**301201 301203 301205**
Ø 25µm (Ø 1.0 mil)	>14.0 gf	>138 mN	1.0~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBE-25A100 GBE-25A300 GBE-25A500**	**301251 301253 301255**
Ø 30µm (Ø 1.2 mil)	>18.1 gf	>178 mN	1.5~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**GBE-30A100 GBE-30A300 GBE-30A500**	**301301 301303 301305**
Ø 32µm (Ø 1.25 mil)	>20.6 gf	>202 mN	1.5~5.0%	**100m 300m 500m**	**1000ft 1000ft 1500ft**	**GBE-32A100 GBE-32A300 GBE-32A500**	**301321 301323 301325**
Ø 35µm (Ø 1.4 mil)	>24.6 gf	>241 mN	1.5~6.0%	**100m 300m 500m**	**1000ft 1000ft 1500ft**	**GBE-35A100 GBE-35A300 GBE-35A500**	**301351 301353 301355**
Ø 38µm (Ø 1.5 mil)	>29.0 gf	>284 mN	1.5~6.0%	**100m 300m 500m**	**1000ft 1000ft 1500ft**	**GBE-38A100 GBE-38A300 GBE-38A500**	**301381 301383 301385**

Spool Information

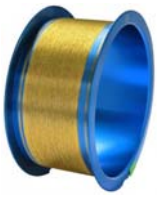
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI) Conductive	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(W)	B
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI) Conductive	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Use with bonder such as Shinkawa SBB-1 or equivalent.
Note 2: Minimal deviation of ball neck height after bumping with steady bump shape.
Note 3: Low deterioration of shear strength during aging test at 200°C. No bond pad damage after bonding.
Note 4: Standard Tolerance: Ø15um~38um ±1 um
Note 5: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm , 35µm , 38µm

GBE Type
How to Order



Part Number System

GBE	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au100) **GBE** = Bumping Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

3	0	1	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au) 4N	**Code** **Description** **0** = Round Wire	**Gold Wire (Au)** **1** = GBE	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **9** = other Meters controlling

Explanation of difference between Gold Bump Wire and Gold Bonding Wire.

Note	Feature	Bump Wire	Bonding Wire
1	Number of Bonds	One Bond Only To Die Pad or Substrate	Two Bonds From Die Pad to Package.
2	Purpose/Application	Single Au (gold) wire is squashed. Wire is then reflowed (melted) to form a bump for a flip chip.	Bonding from the die to the leadfame (or substrate) with a loop (wedge or stitch).
3	Repeatable Wire Break	Bumping wire is intended to break close to neck area of first bond.	Bonding wire has a longer HAZ (*heat affected zone*) to permit the wire to be kinked or looped and pan out for next bond (wedge or stitch)
4	Grain Structure	Dopants added for grain structure during annealing process to allow repeatable wire break after the stud bump formation to make wire softer for wire cut/break mode.	Grain structure in bonding wire enables formation of loop or kink.

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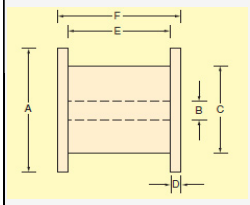
Y-Type
High Power Gold 4N (Au)
Heavy Wire

Ø Diameter ±3~5% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 62.5µm (Ø 2.5 mil)	49.3~80.2 gf	486~386 mN	2.0~12%	**100m**	**320ft**	**Y-62.5N100**	**331631**
Ø 65µm (Ø 2.5 mil)	53.4~86.6 gf	527~856 mN	2.0~12%	**100m**	**320ft**	**Y-65N100**	**331651**
Ø 75µm (Ø 3.0 mil)	70.7~114.9 gf	699~1134 mN	2.0~12%	**100m**	**320ft**	**Y-75N100**	**331751**
Ø 100µm (Ø 4.0 mil)	-	-	-	**50m** **100m**	**160ft** **320ft**	**Y-100P50** **Y-100P100**	**331000** **331001**
Ø 125µm (Ø 5.0 mil)	-	-	-	**50m** **100m**	**160ft** **320ft**	**Y-125P50** **Y-125P100**	**331010** **331011**
Ø 150µm (Ø 6.03 mil)	-	-	-	**50m** **100m**	**160ft** **320ft**	**Y-150P50** **Y-150P100**	**331020** **331021**
Ø 200µm (Ø 8.0 mil)	-	-	-	**25m** **50m**	**80ft** **160ft**	**Y-200P25** **Y-200P50**	**331049** **331040**
Ø 250µm (Ø10.0 mil)	-	-	-	**10m** **25m** **50m**	**32ft** **80ft** **160ft**	**Y-250P10** **Y-250P25** **Y-250P50**	**331057** **331059** **331050**
Ø 500µm (Ø20.0 mil)	-	-	-	**10m** **25m**	**32ft** **80ft**	**Y-SR-500P10** **Y-SR-500P25**	**331118** **331119**

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4WNI	N
	88mm 4.5"	10mm 0.394"	50mm 2.0"	3.0mm 0.12"	25mm 1.0"	31mm 1.25"	No.88	P

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: For wedge to wedge high power bonding.
Note 2: Standard Tolerance: Ø62~100um ±3um , Ø125~150um ±5um , Ø200um ±7um , Ø250~500um ±10um
Note 3: Wire Diameter available: 65µm , 75µm , 100µm , 127µm , 150µm , 175um , 200µm , 250µm , 500um

Y-Type
How to Order

Part Number System

Y	-	100	P	100
Type		Ø Diameter µm	Spool Type	Length Meters
Gold 4N (Au99.99) **Y** = Wedge to Wedge High Power Bonders Bonding Wire		**Code** **Mil** **62.5** 2.5mil **65** 2.5mil **75** 3.0mil **100** 4.0mil **127** 5.0mil **150** 6.0mil **178** 7.0mil **203** 8.0mil **254** 10mil **500** 20mil	**Conductive Aluminum Spool** **N** = 2"x2" AL-4WNI **Polycarbonate Spool** **P** = ∅88mm x 31mm ∅3.5" x 1.25" No.88	**Meters** **Feet** **Spool** **62.5~ 75um** **(2.5~3.0MIL)** **100** 300ft (N) **100~500um** **(4.0~20MIL)** **100** 300ft (P) Meters controlling dimension

Order Number

3	3	1	00	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **3** = Gold (Au)	**Code** **Description** **3** = Round Wire	**Gold Wire (Au)** **1** = Y	**Code** **µm** **Mil** **63** 62.5um 2.5mil **65** 65um 2.5mil **75** 75um 3mil **00** 100um 4mil **01** 127um 5mil **02** 150um 6mil **03** 178um 7mil **04** 203um 8mil **05** 254um 10mil **11** 500um 20mil	Code Meters Feet **5** = 5m (16ft) **7** = 10m (32ft) **9** = 25m (80ft) **0** = 50m (150ft) **1** = 100m (300ft) Meters controlling

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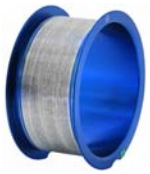
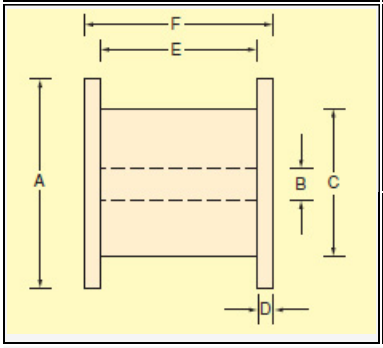
SEA Type
Silver (Ag)
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	2.8~5.6 gf	27~55mN	1.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**SEA-15A100 SEA-15A300 SEA-15A500**	**501151 501153 501155**
Ø 18µm (Ø 0.7 mil)	4.1~8.0 gf	40~78mN	1.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**SEA-18A100 SEA-18A300 SEA-18A500**	**501181 501183 501185**
Ø 20µm (Ø 0.8 mil)	5.1~10.0 gf	50~98mN	1.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**SEA-20A100 SEA-20A300 SEA-20A500**	**501201 501203 501205**
Ø 25µm (Ø 1.0 mil)	7.8~15.4 gf	76~151 mN	1.0~8.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**SEA-25A100 SEA-25A300 SEA-25A500**	**501251 501253 501255**
Ø 30µm (Ø 1.2 mil)	11.1~21.9 gf	109~215 mN	1.0~10.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**SEA-30A100 SEA-30A300 SEA-30A500**	**501301 501303 501305**

Spool Information

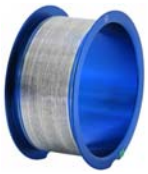
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI)	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape.
Note 3: End wire on spool with Red tape.

INFO

Note 1: Good bondability with reduced material cost compared to gold.
Note 2: High reflectivity in short wavelength range.
Note 3: SEA is original Ag base alloy wire.
Note 4: SEB offers low resistivity similar to 2N Au wire.
Note 5: SEC has softer FAB hardness and low resistivity similar to 4N Au wire.
Note 6: For SEB Type, change 3rd digit in order number to "2"
Note 7: For SEC Type, change 3rd digit in order number to "3" .
Note 8: Wire Diameter available: 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm

SEA Type
How to Order



Part Number System

SEA	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
Silver (Ag100) **SEA** = Bonding Wire **SEB** = Bonding Wire **SEC** = Bonding Wire		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **B** = 2"x2" AL-4 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

5	0	1	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **5** = Silver (Ag)	**Code** **Description** **0** = Round Wire	**Type** **1** = SEA **2** = SEB **3** = SEC	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **9** = other Meters controlling

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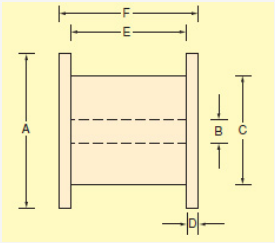
CLR-1AT Type
Palladium Coated Copper
Bonding Wire (4N)

Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	2.0~5.0 gf	20~49mN	3.0~13%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CLR1AT-15N100 CLR1AT-15N300 CLR1AT-15N500 CLR1AT-15N1000**	**700151 700153 700155 700156**
Ø 18µm (Ø 0.7 mil)	3.2~7.2 gf	31~71mN	5.0~15%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CLR1AT-18N100 CLR1AT-18N300 CLR1AT-18N500 CLR1AT-18N1000**	**700181 700183 700185 700186**
Ø 20µm (Ø 0.8 mil)	4.0~8.9 gf	39~87mN	5.0~15%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CLR1AT-20N100 CLR1AT-20N300 CLR1AT-20N500 CLR1AT-20N1000**	**700201 700203 700205 700206**
Ø 25µm (Ø 1.0 mil)	6.3~14.0 gf	62~137mN	5.0~15%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CLR1AT-25N100 CLR1AT-25N300 CLR1AT-25N500 CLR1AT-25N1000**	**700251 700253 700255 700266**
Ø 30µm (Ø 1.2 mil)	9.0~20.2 gf	88~198mN	7.0~20%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CLR1AT-30N100 CLR1AT-30N300 CLR1AT-30N500 CLR1AT-30N1000**	**700301 700303 700305 700306**
Ø 32µm (Ø 1.25 mil)	10.3~22.9 gf	101~225mN	7.0~20%	**100m 300m 1000m**	**300ft 1000ft 3000ft**	**CLR1AT-32N100 CLR1AT-32N300 CLR1AT-32N1000**	**700321 700323 700326**
Ø 38µm (Ø 1.5 mil)	14.4~32.2 gf	141~316mN	7.0~20%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CLR1AT-38N100 CLR1AT-38N300 CLR1AT-38N500**	**700381 700383 700385**
Ø 50µm (Ø 2.0 mil)	29.2~60.4 gf	1286~592mN	10.0~25%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CLR1AT-50N100 CLR1AT-50N300 CLR1AT-50N500**	**700501 700502 700505**

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI)	N
	17.4mm	12.7mm	13.5mm	0.40mm	18.3mm	19.1mm	HALF-INCH Rewind Service By TopLine	H

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: CRL1-AT Original Chemistry is easier to bond than bare copper wire.
Note 2: Wide bonding process window. Excellent reliability. High Performance. Stable bonding
Note 3: Requires grounded wire bonding equipment. Stable bonding N_2 or Forming Gas 95/5.
Note 4: Standard Tolerance: Ø15um~38um ±1 um Ø40~50um ±2 um
Note 5: Wire Diameter : 15µm , 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm , 35µm , 38µm , 40µm , 50µm
Note 6: Half-inch rewind spooling service available from TopLine. See www.topline.tv/Tanaka_Half_Inch.html

CLR-1AT Type
How to Order

Part Number System

CLR1AT	-	25	N	100
Type		Ø Diameter µm	Spool Type	Length Meters
CLR1AT = **Palladium Coated Copper Wire (PCC) Original Chemistry**		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil	**Conductive Spool** **N** = 2"x2" AL-4(WNi) **Half-inch Spool Rewind Service By TopLine** **H** = 1/2" AL-1/2	**Meters** **Feet** **Spool** **100** 300ft (N) **300** 1000ft (N) **500** 1500ft (N) **1000** 3000ft (N) **2500** 8000ft (N) **Half-Inch Rewind Service By TopLine** **Meters** **Feet** **Spool** **25** 75ft (H) **50** 150ft (H) Meters controlling dimension

Order Number

7	0	0	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **7** = Copper Type	**Code** **Description** **0** = Round Wire	**Type** **0** =CLR-1A PCC Cu	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **Half-Inch Rewind Service By TopLine** **0** = 50m (300ft) **9** = 25m (1000ft) Meters controlling

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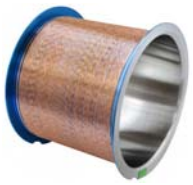
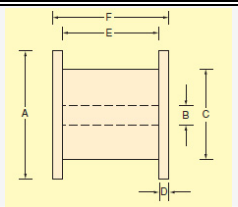
CA-1 Type Copper Alloy Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 15µm (Ø 0.6 mil)	2.4~54 gf	23~53mN	7.0~17%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-15N100 CA1-15N300 CA1-15N500**	**701151 701153 701155**
Ø 18µm (Ø 0.7 mil)	3.4~7.6 gf	33~75mN	7.0~17%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-18N100 CA1-18N300 CA1-18N500**	**701181 701183 701185**
Ø 20µm (Ø 0.8 mil)	4.2~9.5 gf	41~93mN	7.0~17%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-20N100 CA1-20N300 CA1-20N500**	**701201 701203 701205**
Ø 25µm (Ø 1.0 mil)	6.5~14.6 gf	64~143 mN	8.0~20%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-25N300 CA1-25N300 CA1-25N500**	**701251 701253 701255**
Ø 30µm (Ø 1.2 mil)	9.3~20.8 gf	91~204 mN	9.0~22%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-30N100 CA1-30N300 CA1-30N500**	**701301 701303 701305**
Ø 32µm (Ø 1.25 mil)	10.9~24.4 gf	107~239 mN	9.0~22%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-32N100 CA1-32N300 CA1-32N500**	**701321 701323 701325**
Ø 38µm (Ø 1.5 mil)	15.2~33.9 gf	149~332 mN	9.0~22%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-38N100 CA1-38N300 CA1-38N500**	**701381 701383 701385**
Ø 50µm (Ø 2.0 mil)	28.5~59.9 gf	279~587 mN	12~27%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CA1-50N100 CA1-50N300 CA1-50N500**	**701501 701503 701505**
Ø 70µm (Ø 2.8 mil)	55.8~117.4 gf	547~1151 mN	12~27%	**100m 300m**	**300ft 1000ft**	**CA1-70N100 CA1-70N300**	**701701 701703**

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4 (WNi)	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Easier to bond than bare copper wire.
Note 2: Wide bonding process window. Excellent reliability. High Performance. Stable bonding
Note 3: Requires grounded wire bonding equipment. Stable bonding with Forming Gas 95/5.
Note 4: Standard Tolerance: Ø15um~38um ±1 um Ø40um~50um ±2 um Ø60um~70um ±3 um
Note 5: Wire Diameter: 15µm , 18µm , 20µm , 23µm , 25µm , 30µm , 32µm , 38µm , 40µm , 50µm , 60µm , 70µm

CA-1 Type
How to Order

Part Number System

CA1	-	25	N	100
Type		Ø Diameter µm	Spool Type	Length Meters
CA1 = **Copper Alloy**		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **60** 2.4mil **70** 2.7mil	**Conductive Spool** **N** = 2"x2" AL-4(WNi)	**Meters** **Feet** **Spool** **100** 300ft (N) **300** 1000ft (N) **500** 1500ft (N) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

7	0	1	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **7** = Copper Type	**Code** **Description** **0** = Round Wire	**Type** **1** =CA-1 Cu Alloy	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **60** 2.4mil **70** 2.7mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **9** = other Meters controlling

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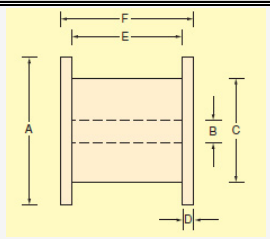
CFB-1 Type Bare Copper Bonding Wire

Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 18µm (Ø 0.7 mil)	3.6~7.8 gf	35~76mN	7.0~17%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CFB1-18N100 CFB1-18N300 CFB1-18N500 CFB1-18N1000**	**702181 702183 702185 702186**
Ø 20µm (Ø 0.8 mil)	4.4~9.6 gf	43~94mN	7.0~17%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CFB1-20N100 CFB1-20N300 CFB1-20N500 CFB1-20N1000**	**702201 702203 702205 702206**
Ø 25µm (Ø 1.0 mil)	6.8~14.8 gf	67~145 mN	8.0~20%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CFB1-25N100 CFB1-25N300 CFB1-25N500 CFB1-25N1000**	**702251 702253 702255 702256**
Ø 30µm (Ø 1.2 mil)	9.7~21.1 gf	95~207 mN	12~24%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CFB1-30N100 CFB1-30N300 CFB1-30N500 CFB1-30N1000**	**702301 702303 702305 702306**
Ø 32µm (Ø 1.25 mil)	11.3~24.8 gf	111~243 mN	12~24%	**100m 300m 500m 1000m**	**300ft 1000ft 1500ft 3000ft**	**CFB1-32N100 CFB1-32N300 CFB1-32N500 CFB1-32N1000**	**702321 702323 702325 702326**
Ø 38µm (Ø 1.5 mil)	15.8~34.5 gf	155~338 mN	12~24%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CFB1-38N100 CFB1-38N300 CFB1-38N500**	**702381 702383 702385**
Ø 50µm (Ø 2.0 mil)	26.5~57.9 gf	260~568 mN	14~26%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**CFB1-50N100 CFB1-50N300 CFB1-50N500**	**702501 702503 702505**
Ø 70µm (Ø 2.8 mil)	52.0~113.5 gf	510~1113 mN	14~26%	**100m 300m**	**300ft 1000ft**	**CFB1-70N100 CFB1-70N300**	**702701 702703**

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI)	N

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Easier to bond than bare copper wire.
Note 2: Wide bonding process window. Excellent reliability. High Performance. Stable bonding
Note 3: Requires grounded wire bonding equipment. Stable bonding with Forming Gas 95/5.
Note 4: Standard Tolerance: Ø15um~38um ±1 um Ø40um~50um ±2 um Ø60um~70um ±3 um
Note 5: Wire Diameter: 18µm , 20µm , 23µm , 25µm , 28µm , 30µm , 32µm , 38µm , 40µm , 50µm , 60µm , 70µm

CFB-1 Type
How to Order

Part Number System

CFB1	-	25	N	100
Type		Ø Diameter µm	Spool Type	Length Meters
CFB1 = **Bare Copper**		**Code** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **60** 2.4mil **70** 2.7mil	**Conductive Spool** **N** = 2"x2" AL-4(WNI)	**Meters** **Feet** **Spool** **100** 300ft (N) **300** 1000ft (N) **500** 1500ft (N) **1000** 3000ft (N) **2500** 8000ft (N) Meters controlling dimension

Order Number

7	0	2	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **7** = Copper Type	**Code** **Description** **0** = Round Wire	**Type** **2** =CFB-1 Bare Cu	**µm** **Mil** **15** 0.6mil **18** 0.7mil **20** 0.8mil **23** 0.9mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **60** 2.4mil **70** 2.7mil	Code Meters Feet **1** = 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **9** = other Meters controlling

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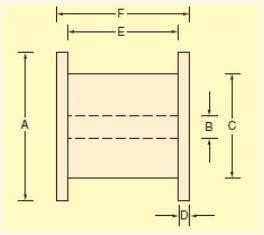
CP-1 Type
Heavy Power Copper Bonding Wire

Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 200µm (Ø 8 mil)	510~917 gf	5.0~9.0 N	5~35%	**100m**	**300ft**	**CP1-200P100**	**707041**
Ø 250µm (Ø 10 mil)	816~1427 gf	8.0~14.0N	5~35%	**100m**	**300ft**	**CP1-250P100**	**707051**
Ø 300µm (Ø 12 mil)	1326~2039 gf	13.0~20.0 N	5~35%	**100m**	**300ft**	**CP1-300P100**	**707061**
Ø 380µm (Ø 15 mil)	2040~3059 gf	20.0~30.0 N	10~40%	**100m**	**300ft**	**CP1-380P100**	**707081**
Ø 400µm (Ø 16 mil)	2346~3365 gf	23.0~33.0 N	10~40%	**100m**	**300ft**	**CP1-400P100**	**707091**
Ø 500µm (Ø 20 mil)	4079~5302 gf	40.0~52.0 N	10~50%	**100m**	**300ft**	**CP1-500P100**	**707111**

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	88mm 3.50″	10mm 0.040″	50mm 2.0″	3mm 0.12″	25mm 1.0″	31mm 1.25″	No.88 No.88B	P
	120mm 4.75"	10mm 0.40"	54mm 2.0"	4mm 1.57"	30mm 1.18"	38mm 1.50"	No. 120	R

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Heavy Copper 4N Bonding Wire. Excellent electrical conductivity (40% better than aluminum).
Note 2: Annealed. Heat treated. Stress relieved (SR type).
Note 3: Requires grounded wire bonding equipment
Note 4: Standard Tolerance: Ø100um ~ Ø150um ±5 um Ø200um ~ Ø450um ±7 um Ø500um ±10 um
Note 5: Wire Diameter: 200um, 250um, 300um, 380um, 400µm and 500µm

CP-1 Type
How to Order

Part Number System

CP1	-	400	P	100
Type		Ø Diameter µm	Spool Type	Length Meters
CP1 = **Heavy Power Copper 4N**		**Code** **Mil** **200** 8mil **250** 10mil **300** 12mil **380** 15mil **400** 16mil **500** 20mil	**Polycarbonate Spool** **P** = ∅ 88mm x 31mm ∅ 3.5" x 1.25" **R** = ∅120mm x 38mm ∅ 3.5" x 1.25"	100~380um **Meters** **Feet** **Spool** **100** 328ft (P) **200** 650ft (P) **300** 1000ft (P) **400** 1300ft (P) **500** 1600ft (P) 400~500um **Meters** **Feet** **Spool** **100** 328ft (P) **200** 650ft (P) **300** 1000ft (P /R) **500** 1600ft (R)

Order Number

7	0	7	09	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **7** = Copper Type	**Code** **Description** **0** = Round Wire	**Type** **7** =CP-1 Heavy Power Cu	**Code** **µm** **Mil** **04** 200um 8mil **05** 250um 10mil **06** 300um 12mil **07** 350um 14mil **08** 380um 15mil **09** 400um 16mil **10** 450um 18mil **11** 500um 20mil	Code Meters Feet **0** = 50m (164ft) **1** = 100m (328ft) **2** = 200m (650ft) **3** = 300m (1000ft) **4** = 400m (1300ft) **5** = 500m (1600ft) **6** = 600m (2000ft) **7** = 700m (2300ft) **8** = 800m (2600ft) **9** = 1000m (3300ft) Meters controlling

Wire Size	CP-1 Maximum Meters per Spool Type								
	100m	200m	300m	400m	500m	600m	700m	800m	1000m
200um	No. 88B	No. 88B	No. 88B	No. 88B	No. 88B	No. 88B	No. 88B	No. 88B	-
250um	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88
300um	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	-	-
380um	No. 88	No. 88	No. 88	No. 88	No. 88	No. 88	-	-	-
400um	No. 88	No. 88	No. 88	No. 120	No. 120	No. 120	No. 120	No. 120	-
500um	No. 88	No. 88	No. 120	No. 120	No. 120	No. 120	-	-	-

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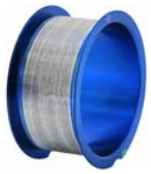
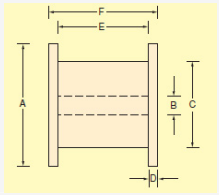
TABN Type
Aluminum Al-1% Si
Bonding Wire



Ø Diameter ±1% µm	Breaking Load (gf)	Breaking Load (mN)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
Ø 18µm (Ø 0.7 mil)	6.0~7.5 gf	66~71mN	0.5~4.5%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-18A100 TABN-18A300 TABN-18A500**	**403181 403183 403185**
Ø 20µm (Ø 0.8 mil)	8.0~10 gf	79~98mN	0.5~4.5%	**100m 500m**	**300ft 1500ft**	**TABN-20A100 TABN-20A500**	**403201 403205**
Ø 25µm (Ø 1.0 mil)	13~15 gf	127~147 mN	0.5~4.5%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-25A100 TABN-25A300 TABN-25A500**	**403251 403253 403255**
Ø 30µm (Ø 1.2 mil)	17~19 gf	167~186 mN	0.5~4.5%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-30A100 TABN-30A300 TABN-30A500**	**403301 403303 403305**
Ø 32µm (Ø 1.25 mil)	19~21 gf	186~206 mN	0.5~4.5%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-32A100 TABN-32A300 TABN-32A500**	**403321 403323 403325**
Ø 33µm (Ø 1.3 mil)	19~21 gf	186~206 mN	0.5~4.5%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-33A100 TABN-33A300 TABN-33A500**	**403331 403333 403335**
Ø 38µm (Ø 1.5 mil)	31~34gf	304~333 mN	0.5~5.0%	**100m 300m 500m**	**300ft 1000ft 1500ft**	**TABN-38A100 TABN-38A300 TABN-38A500**	**403381 403383 403385**
Ø 50µm (Ø 2.0 mil)	47~53 gf	461~520 mN	0.5~6.0%	**100m 500m**	**300ft 1500ft**	**TABN-50A100 TABN-50A500**	**403501 403505**
Ø 75µm (Ø 3.0 mil)	115~135 gf	1090~1325 mN	0.5~6.0%	**100m 500m**	**300ft 1500ft**	**TABN-75C100 TABN-75C500**	**403751 403755**
Ø 80µm (Ø 3.2 mil)	130~150 gf	1275~1471 mN	0.5~6.0%	**100m 500m**	**300ft 1500ft**	**TABN-80C100 TABN-80N500**	**403801 403805**

Spool Information

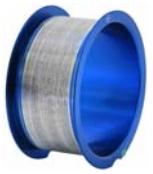
Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(W)	C
	58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4(WNI)	N
	17.4mm	12.7mm	13.5mm	0.40mm	18.3mm	19.1mm	HALF-INCH Rewind Service By TopLine	H

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. End wire on spool with Red tape.

INFO

Note 1: Uniform distribution of Si and stable mechanical property.
Note 2: TABN with nickel doping for better corrosion resistance under PCT.
Note 3: Standard Tolerance: Ø18um~38um ±1 um Ø40um~50um ±2 um Ø60~80um ±3 um
Note 4: Wire Diameter available: 18µm , 20µm , 25µm , 28µm , 30µm , 32µm , 35µm , 38µm , 40µm , 50µm , 80µm
Note 5: Half-inch rewind spooling service available from TopLine. See www.topline.tv/Tanaka_Half_Inch.html

TABN Type
How to Order



Part Number System

TABN	-	25	A	100
Type		Ø Diameter µm	Spool Type	Length Meters
TABN = **Aluminum Al-1% Si** With Nickel Doping **TABW** = **LEGACY Aluminum Al-1% Si** Without Nickel Doping Scheduled for Obsolescence		**Code** **Mil** **18** 0.7mil **20** 0.8mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **75** 3.0mil **80** 3.2mil	**Aluminum Spool** **A** = 2"x1" AL-2(W) **N** = 2"x2" AL-4WNI Rewind Service By TopLine **HALF-INCH** **H** = 1/2" AL-1/2	**Meters** **Feet** **Spool** **25** 75ft (H) **50** 150ft (H) **100** 300ft (A) **300** 1000ft (A) **500** 1500ft (A) **1000** 3000ft (N) **2500** 8000ft (N) **Rewind Service Half-Inch Spool** **Meters** **Feet** **Spool** **25** 75ft (H) **50** 150ft (H) Meters controlling dimension

Order Number

4	0	3	25	1
Alloy	Shape	Model	Ø Diameter	Length
Code • Description **4** = Aluminum	**Code** **Description** **0** = Round Wire	**Type** **3** =TABN Al-1%Si With Nickel **LEGACY** **4** =TABW Al-1%Si Without Nickel	**µm** **Mil** **18** 0.7mil **20** 0.8mil **25** 1.0mil **28** 1.1mil **30** 1.2mil **32** 1.25mil **35** 1.4mil **38** 1.5mil **40** 1.6mil **50** 2.0mil **75** 3.0mil **80** 3.2mil	Code Meters Feet **1**= 100m (300ft) **3** = 300m (1000ft) **5** = 500m (1500ft) **6** = 1000m (3000ft) **7** = 2500m (8000ft) **Rewind Service By TopLine** Half-Inch Spool **9**= 25m (75ft) **0**= 50m (150ft) Meters controlling

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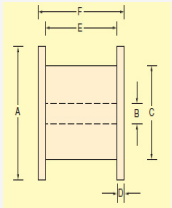
TANW SOFT
Aluminum (Al) Power
Large Diameter Bonding Wire

Ø Diameter	Breaking Load (gf)	Breaking Load (N)	Elongation EL (%)	Temper	Length Meters	Length Feet	Part Number	Order Nr
Ø 100µm (Ø 4mil)	50~80 gf	0.49~0.78N	10~30%	S-1	100m 500m	300ft 1500ft	TANW-100K100 TANW-100K500	405001 405005
Ø 125µm (Ø 5mil)	70~120 gf	0.69~1.18 N	10~30%	S-1	100m 500m	300ft 1500ft	TANW-125K100 TANW-125K500	405011 405015
Ø 150µm (Ø 6mil)	100~200 gf	0.98~1.96 N	10~30%	S-1	100m 500m	300ft 1500ft	TANW-150K100 TANW-150K500	405021 405025
Ø 175µm (Ø 7mil)	140~240 gf	1.37~2.35 N	10~30%	S-1	100m 500m	300ft 1500ft	TANW-175K100 TANW-175K500	405031 405035
Ø 200µm (Ø 8mil)	140~200 gf	1.37~1.96N	10~30%	S-2	100m 500m	300ft 1500ft	TANW-200K100 TANW-200K500	405041 405045
Ø 250µm (Ø 10mil)	210~300 gf	2.06~2.94 N	10~30%	S-2	100m 500m	300ft 1500ft	TANW-250K100 TANW-250K500	405051 405055
Ø 300µm (Ø 12mil)	300~420 gf	2.94~4.12 N	10~30%	S-2	100m 500m	300ft 1500ft	TANW-300K100 TANW-300K500	405061 405065
Ø 350µm (Ø 14mil)	450~550 gf	4.41~5.39 N	10~30%	S-2	100m 500m	300ft 1500ft	TANW-350K100 TANW-350K500	405071 405075
Ø 380µm (Ø 15mil)	500~700 gf	4.90~6.86N	10~30%	S-2	100m 500m	300ft 1600ft	TANW-380K100 TANW-380K500	405081 405085
Ø 400µm (Ø 16mil)	550~750 gf	5.39~7.35 N	10~30%	S-2	100m 500m	300ft 1600ft	TANW-400K100 TANW-400K500	405091 405095
Ø 450µm (Ø 18mil)	700~850 gf	6.86~8.34 N	10~30%	S-2	100m 300m	300ft 1000ft	TANW-450K100 TANW-450K300	405101 405103
Ø 500µm (Ø 20mil)	800~1100 gf	7.85~10.79 N	10~30%	S-2	100m 300m	300ft 1000ft	TANW-500K100 TANW-500K300	405111 405113
Ø 600µm (Ø 24mil)	1200~1700 gf	11.7~17.3 N	10~40%	S-2	100m 200m	300ft 600ft	TANW-600K100 TANW-600K200	405121 405122

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	89mm 3.5″	11mm 0.43″	50m 2.0″	3mm 0.118"	31mm 1.25″	37mm 1.45″	No. 88K (∅ 100um~600um)	K (Clear)
	120mm 4.75″	11mm 0.43″	64mm 2.52″	3mm 0.118"	30mm 1.18″	38mm 1.5″	No. 120K ∅ 300um~600um	T (Clear)

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. Note 3: End wire on spool with Red tape.

INFO

Note 1: Large diameter aluminum (Al) bonding wire for power devices.
Note 2: Excellent bondability and corrosion resistance
Note 3: Standard Tolerance: ∅100um~175um ±5 um ∅200um~450um ±7 um ∅500~600um ±10 um

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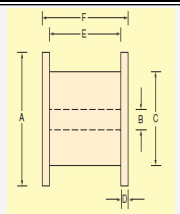
TANW MID Strong Aluminum (Al) Power Large Diameter Bonding Wire

Ø Diameter	Breaking Load (gf)	Breaking Load (N)	Elongation EL (%)	Temper	Length Meters	Length Feet	Part Number	Order Nr
Ø 200µm (Ø 8mil)	200~300 gf	1.96~2.94N	10~30%	S-1	100m 500m 1000m	300ft 1500ft 3300ft	TANW-MID-200K100 TANW-MID-200K500 TANW-MID-200K1000	406041 406045 406049
Ø 250µm (Ø 10mil)	300~450 gf	2.94~4.41 N	15~40%	S-1	100m 500m 1000m	300ft 1500ft 3300ft	TANW-MID-250K100 TANW-MID-250K500 TANW-MID-250K1000	406051 406055 406059
Ø 300µm (Ø 12mil)	400~600 gf	3.92~5.88 N	15~40%	S-1	100m 500m 1000m	300ft 1500ft 3300ft	TANW-MID-300K100 TANW-MID-300K500 TANW-MID-300T1000	406061 406065 406069
Ø 350µm (Ø 14mil)	570~960 gf	5.58~9.40 N	15~40%	S-1	100m 300m 500m 1000m	300ft 1000ft 1500ft 3300ft	TANW-MID-350K100 TANW-MID-350K300 TANW-MID-350K500 TANW-MID-350T1000	406071 406073 406075 406079
Ø 380µm (Ø 15mil)	750~1100 gf	6.75~10.78N	15~40%	S-1	100m 300m 500m 1000m	300ft 1000ft 1600ft 3300ft	TANW-MID-380K100 TANW-MID-380K300 TANW-MID-380K500 TANW-MID-380T1000	406081 406083 406085 406089
Ø 400µm (Ø 16mil)	750~1250 gf	6.75~12.25 N	15~40%	S-1	100m 300m 500m 1000m	300ft 1000ft 1600ft 3300ft	TANW-MID-400K100 TANW-MID-400K300 TANW-MID-400K500 TANW-MID-400T1000	406091 406093 406095 406099
Ø 450µm (Ø 18mil)	950~1580 gf	9.31~15.48 N	15~40%	S-1	100m 200m 300m 500m	300ft 600ft 1000ft 1600ft	TANW-MID-450K100 TANW-MID-450K200 TANW-MID-450K300 TANW-MID-450T500	406101 406102 406103 406105
Ø 500µm (Ø 20mil)	1170~1900 gf	11.5~18.6 N	15~40%	S-1	100m 200m 300m 500m	300ft 600ft 1000ft 1600ft	TANW-MID-500K100 TANW-MID-500K200 TANW-MID-500K300 TANW-MID-500T500	406111 406112 406113 406115

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	89mm 3.5″	11mm 0.43″	50m 2.0″	3mm 0.118"	31mm 1.25″	37mm 1.45″	No. 88K (∅ 100um~600um)	K (Clear)
	120mm 4.75″	11mm 0.43″	64mm 2.52″	3mm 0.118"	30mm 1.18″	38mm 1.5″	No. 120K ∅ 100um~600um	T (Clear)

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. Note 3: End wire on spool with Red tape.

INFO

Note 1: Large diameter aluminum (Al) bonding wire for power devices.
Note 2: Excellent bondability and corrosion resistance
Note 3: Standard Tolerance: ∅100um~175um ±5 um ∅200um~450um ±7 um ∅500~600um ±10 um

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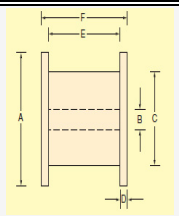
TANW HARD
Strong Aluminum (Al) Power Large Diameter Bonding Wire

Ø Diameter	Breaking Load (gf)	Breaking Load (N)	Elongation EL (%)	Temper	Length Meters	Length Feet	Part Number	Order Nr
Ø 500µm (Ø 20mil)	1800~2200 gf	18.3~22.4 N	5~30%	S-1	100m 200m 300m 500m	300ft 600ft 1000ft 1600ft	TANW-HARD-500K100 TANW-HARD-500K200 TANW-HARD-500K300 TANW-HARD-500T500	407111 407112 407113 407115

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	89mm 3.5″	11mm 0.43″	50m 2.0″	3mm 0.118"	31mm 1.25″	37mm 1.45″	No. 88K (∅ 100um~600um)	K (Clear)
	120mm 4.75″	11mm 0.43″	64mm 2.52″	3mm 0.118"	30mm 1.18″	38mm 1.5″	No. 120K ∅ 100um~600um	T (Clear)

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. Note 3: End wire on spool with Red tape.

INFO

Note 1: Large diameter aluminum (Al) bonding wire for power devices.
Note 2: Excellent bondability and corrosion resistance
Note 3: Standard Tolerance: ∅100um~175um ±5 um ∅200um~450um ±7 um ∅500~600um ±10 um

TANW Type
How to Order

Part Number System

TANW	-	300	K	100
Type		Ø Diameter µm	Spool Type	Length Meters
TANW = SOFT Bonding Wire **Large Diameter** **Aluminum Al** **TANW-MID** **Strong-Range** **Breaking Load** **TANW-HARD** **Strongest** **Breaking Load**		**Code** **Mil** **100** 4mil **125** 5mil **150** 6mil **175** 7mil **200** 8mil **250** 10mil **300** 12mil **350** 14mil **380** 15mil **400** 16mil **450** 18mil **500** 20mil **600** 24mil	**Polycarbonate Spool** **K** = ∅88mm x 31mm ∅3.5" x 1.25" 11mm Shaft Spool 88K **T** = ∅120mm x 38mm ∅4.75" x 1.5" 11mm Shaft Spool 120K	**Meters** **Feet** **100** 300ft **200** 600ft **300** 1000ft **400** 1300ft **500** 1600ft **600** 2000ft **700** 2300ft **800** 2600ft **1000** 3200ft Meters controlling dimension

Order Number

4	0	5	06	1
Alloy	Shape	Model	Ø Diameter Code	Length
Code • Description **4** = Aluminum	**Code** **Description** **0** = Round Wire	**Type** **5** =TANW-SOFT **6** = TANW-MID **7** = TANW-HARD	**Code** **µm** **Mil** **00** 100um 4mil **01** 125um 5mil **02** 150um 6mil **03** 175um 7mil **04** 200um 8mil **05** 250um 10mil **06** 300um 12mil **07** 350um 14mil **08** 380um 15mil **09** 400um 16mil **10** 450um 18mil **11** 500um 20mil **12** 600um 24mil	Code Meters Feet **1** = 100m (300ft) **2** = 200m (600ft) **3** = 300m (1000ft) **4** = 400m (1300ft) **5** = 500m (1500ft) **6** = 600m (2000ft) **7** = 700m (2300ft) **8** = 800m (2600ft) **9** = 1000m (3200ft) Meters controlling

Wire Size	TANW Maximum Meters per Spool Type							
	100m	200m	300m	400m	500m	600m	800m	1000m
100~250um	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K
300um	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 120K
350~400um	No. 88K	No. 88K	No. 88K	No. 88K	No. 88K	No. 120K	No. 120K	No. 120K
450um	No. 88K	No. 88K	No. 88K	No. 88K	No. 120K	No. 120K	No. 120K	No. 120K
500um	No. 88K	No. 88K	No. 88K	No. 120K	No. 120K	No. 120K	No. 120K	No. 120K
600um	No. 88K	No. 88K	No. 120K	No. 120K	No. 120K	No. 120K	No. 120K	No. 120K

SPOOL code in Part Number: No.88K type "K". No.120 type "T"

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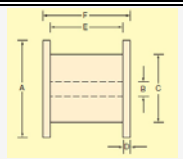
TABR Type Aluminum (Al) Ribbon Bonding Wire

Size Width	Size Thickness	Breaking Load (gf)	Breaking Load (N)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
500µm (± 50µm)	**100µm** (± 10µm)	275~425 gf	2.7~4.2 N	≥10%	100m 200m	300ft 600ft	TABR-500x100P100 TABR-500x100P200	412461 412462
750µm (± 50µm)	**100µm** (± 10µm)	413~638 gf	4.0~6.2 N	≥10%	100m 300m	300ft 1000ft	TABR-750x100P100 TABR-750x100P300	412481 412483
1000µm (± 50µm)	**100µm** (± 10µm)	550~850 gf	5.4~8.3 N	≥10%	100m 500m	300ft 1500ft	TABR-1000x100P100 TABR-1000x100R500	412491 412495
	150µm (± 15µm)	675~1125 gf	6.6~11.0 N	≥10%	100m 400m	300ft 1300ft	TABR-1000x150P100 TABR-1000x150R400	412641 412644
	200µm (± 20µm)	900~1500 gf	8.8~14.7 N	≥10%	100m 400m	300ft 1300ft	TABR-1000x200P100 TABR-1000x200R400	412841 412844
1500µm (± 75µm)	**100µm** (± 10µm)	715~1225 gf	7.0~12.0 N	≥10%	100m 400m	300ft 1300ft	TABR-1500x100P100 TABR-1500x100R400	412421 412424
	150µm (± 15µm)	1013~1688 gf	9.9~16.5 N	≥10%	100m 300m	300ft 1000ft	TABR-1500x150P100 TABR-1500x150R300	412651 412653
	200µm (± 20µm)	1350~2250 gf	13.2~22.1 N	≥10%	100m 400m	300ft 1300ft	TABR-1500x200P100 TABR-1500x200R400	412851 412854
	250µm (± 25µm)	1688~2813 gf	16.5~27.6 N	≥10%	100m 300m	300ft 1300ft	TABR-1500x250P100 TABR-1500x250R300	412951 412953
	300µm (± 30µm)	2025~3375 gf	19.8~33.1 N	≥10%	50m 200m	300ft 600ft	TABR-1500x300P50 TABR-1500x300R200	412980 412982
2000µm (± 100µm)	**150µm** (± 15µm)	1350~2250 gf	13.2~22.1 N	≥10%	100m 400m	300ft 1300ft	TABR-2000x150P100 TABR-2000x150R400	412661 412664
	200µm (± 20µm)	1800~3000 gf	17.6~29.4 N	≥10%	100m 300m	300ft 1000ft	TABR-2000x200R100 TABR-2000x200R300	412861 412863
	250µm (± 25µm)	2250~3750 gf	22.1~36.7 N	≥10%	50m 200m	150ft 600ft	TABR-2000x250P50 TABR-2000x250R200	412960 412962
	300µm (± 30µm)	2700~4500 gf	26.4~44.1 N	≥10%	50m 200m	150ft 600ft	TABR-2000x300P50 TABR-2000x300R200	412990 412992
	400µm (± 40µm)	3600~6000 gf	36.7~61.2 N	≥10%	50m 100m	150ft 300ft	TABR-2000x400P50 TABR-2000x400R100	412790 412791

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	88mm 3.5"	10mm 0.40"	50mm 2.0"	3mm 0.12"	25mm 1.0"	31mm 1.25"	No. 88	P
	120mm 4.75"	10mm 0.40"	54mm 2.0"	4mm 1.57"	30mm 1.18"	38mm 1.50"	No. 120	R

INFO

Note 1: TABR Type Al ribbon is fabricated using a dry rolled process. Edges are smooth without sharp edges. No lubrication oils are during fabrication. Excellent corrosion resistance. Good surface smoothness.

Note 2: Tanaka's specially formulated winding process assures consistent de-spooling and smooth bonding. Not parallel winding. Excellent solution for power devices. TABR is made in Japan.

TABR Type
How to Order

Part Number System

TABR	-	750x100	P	100
Type		Size Code (um)	Spool Type	Length Meters
TABR = **Aluminum Al Bonding Ribbon**		**Code** **W x Th** **500x100** = 0.5 x 0.10mm **750x100** = 0.8 x 0.10mm **1000x100** = 1.0 x 0.10mm **1500x100** = 1.0 x 0.10mm **1500x200** = 1.5 x 0.20mm **2000x150** = 2.0 x 0.15mm **2000x200** = 2.0 x 0.20mm **2000x250** = 2.0 x 0.25mm **2000x300** = 2.0 x 0.30mm **2000x400** = 2.0 x 0.40mm	**Polycarbonate Spool** **P** = ∅88mm x 31mm ∅3.5" x 1.25" **R**= ∅120mm x 38mm ∅4.75" x 1.50"	**Meters** **Feet** **50** 150ft **100** 300ft **200** 600ft **300** 1000ft **400** 1300ft **500** 1600ft Meters controlling

Order Number

4	1	2	48	1
Alloy	Shape	Model	Size Code	Length
Code • Description **4** = Aluminum	**Code** **Description** **1** = Flat Wire	**Type** **2** =TABR Al Ribbon	**Code** **W x Th** **See Table Below**	Code Meters Feet **0** = 50m (150ft) **1** = 100m (328ft) **2** = 200m (600ft) **3** = 300m (1000ft) **4** = 400m (1300ft) **5** = 500m (1600ft) **9** = other

Ribbon Size		TABR Maximum Meters per Spool Type					
Width um	**Thick** um	**50m**	**100m**	**200m**	**300m**	**400m**	**500m**
500um	100um	No.88	No. 88	No.88	-	-	-
750um		No.88	No. 88	No.88	No.88	No.120	No.120
1000um		No.88	No. 88	No.88	No.120	No.120	No.120
1500um		No.88	No. 88	No.120	No.120	No.120	No.120
1000um	150um	No.88	No. 88	No.120	No.120	No.120	No.120
1500um		No.88	No. 88	No.120	No.120	No.120	No.120
2000um		No.88	No. 88	No.120	No.120	No.120	-
1000um	200um	No.88	No. 88	No.120	No.120	No.120	No.120
1250um		No.88	No. 88	No.120	No.120	No.120	-
1500um		No.88	No. 88	No.120	No.120	No.120	-
2000um		No.88	No. 88 No.120	No.120	No.120	-	-
1500um	250um	No.88	No. 88	No.120	No.120	-	-
2000um		No.88	No.120	No.120	-	-	-
1500um	300um	No.88	No.120	No.120	-	-	-
2000um		No.88	No.120	No.120	-	-	-
2000um	400um	No.88	No.120	No.120 - 150m	-	-	-

SPOOL code in Part Number: No.88 type "P". No.120 type "R"

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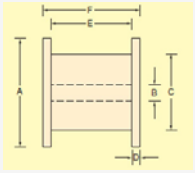
AuR Type Gold (Au) Ribbon Bonding Wire 4N

Size Width	Size Thickness	Breaking Load (gf)	Breaking Load (N)	Elongation EL (%)	Length Meters	Length Feet	Part Number	Order Nr
38um 1.5mil	**12.7um** 0.5mil	7.2~15.0 gf	71~147 N	≥ 2.0%	50m	150ft	AuR-38x12.7A50	316380
50um 2.0mil		9.5~19.7 gf	94~193 N	≥ 2.0%	50m	150ft	AuR-50x12.7A50	316500
75um 3.0mil		14.3~29.5 gf	141~289 N	≥ 2.0%	50m	150ft	AuR-75x12.7A50	316520
100um 4.0mil		19.1~39.4 gf	188~386 N	≥ 2.0%	50m	150ft	AuR-100x12.7A50	316530
125um 5.0mil		23.8~49.2gf	234~482 N	≥ 2.0%	50m	150ft	AuR-125x12.7A50	316540
150um 6.0mil		28.6~59.2 gf	282~579 N	≥ 2.0%	50m	150ft	AuR-150x12.7A50	316550
50um 2.0mil	**25um** 1.0mil	18.8~38.8 gf	185~380 N	≥ 2.0%	50m	150ft	AuR-50x25A50	316100
75um 3.0mil		28.1~58.1 gf	276~569 N	≥ 2.0%	50m	150ft	AuR-75x25A50	316110
100um 4.0mil		37.5~77.5 gf	368~686 N	≥ 2.0%	50m	150ft	AuR-100x25A50	316120
125um 5.0mil		46.9~96.9 gf	460~950 N	≥ 2.0%	50m	150ft	AuR-125x25A50	316130
150um 6.0mil		56.3~116 gf	553~1140N	≥ 2.0%	50m	150ft	AuR-150x25A50	316140
200um 8.0mil		75.0~155 gf	736~1520N	≥ 2.0%	50m	150ft	AuR-200x25A50	316150
250um 10.0mil		93.8~194 gf	936~1900N	≥ 2.0%	50m	150ft	AuR-250x25A50	316160
125um 5.0mil	**50um** 2.0mil	9.38~194 gf	920~1900N	≥ 2.0%	50m	150ft	AuR-125x50A50	316220

Spool Information

Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Nr Code
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2	A
	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2(WNI)	C
	17.4mm	12.7mm	13.5mm	0.40mm	18.3mm	19.1mm	HALF-INCH Rewind Service By TopLine	H

Note 1: Round Wire is wound forward/cross pattern (Cross wound-cross hatch wind)
Note 2: Start wire on spool with Green tape. Note 3: End wire on spool with Red tape.

INFO

Note 1: AuR Type Au Gold ribbon is fabricated using dry process. Provides an excellent solution for RF devices. No lubrication oils are introduced during fabrication. Excellent corrosion resistance. Tanaka AuR ribbon is made using a rolled process. Edges are smooth without sharp edges. Good surface smoothness.

Note 2: Alternative Gold Ribbon with Be (Beryllium) available as Type AuR-3 Type 353xxx.

AuR Type
How to Order

Part Number System

AuR	-	100x12.7	A	50
Type		Size Code	Spool Type	Length Meters
AuR = **Gold Au Bonding Ribbon 4N** **AuR3 = Gold Au Be Doped 4N**		**W x Th** 25~200 x 12.7um 32 x 16um 80~200 x 20um 50~250 x 25um 125 x 50um * *See Other Sizes*	**Aluminum Spool** **A** = 2"x1" AL-2 **Conductive Spool** **C** = 2"x1" AL-2(WNI) **N** = 2"x2" AL-4(WNI) **Rewind Service** **H** = 1/2" HALF	**Meters Feet Spool** **50** 150ft (A) **Special:** **30** 100ft (A) **Half-Inch Rewind Service** **10** 33ft (H) Meters controlling dimension

Order Number

3	1	6	53	0
Alloy	Shape	Model	Size Code	Length
Code • Description **3** = Gold	**Code Description** **1** = Flat Wire 2-inch **(A)** Spool **2** = Flat Wire 1/2-inch **(H)** Spool Rewind Service By TopLine **5** = Flat Wire 2-inch **(A)** Spool Be Doped	**Type** **6** =AuR Au Ribbon **3** =AuR Au Ribbon Be Doped	**Code Width x Thick** **51** = 25 x 12.7um **38** = 38 x 12.7um **50** = 50 x 12.7um **52** = 75 x 12.7um **53** = 100 x 12.7um **55** = 150 x 12.7um **10** = 50 x 25um **11** = 75 x 25um **12** = 100 x 25um **13** = 125 x 25um **14** = 150 x 25um **15** = 200 x 25um **16** = 250 x 25um **22** = 125 x 50um	Code Meters Feet **Spool "H"** **0** = 10m (33ft) **Spool "A"** **0** = 50m (150ft) **3** = 30m (100ft) Meters controlling

Sizes Codes

12.7um	16um	20um	25um	50um
0.5mil	0.63 mil	0.8mil	1.0mil	2.0mil
Code • Width **51** = 25um **38** = 38um **50** = 50um **52** = 75um **53** = 100um **54** = 125um **55** = 150um	**Code • Width** **32** = 32um	**Code • Width** **09** = 80um **57** = 200um	**Code • Width** **10** = 50um **11** = 75um **12** = 100um **13** = 125um **14** = 150um **15** = 200um **16** = 250um	**Code • Width** **22** = 125um

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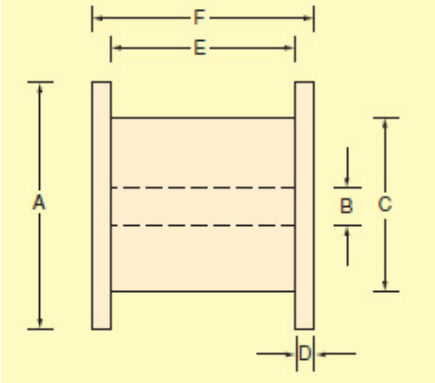
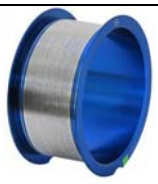
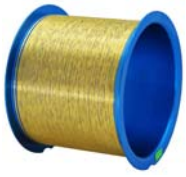
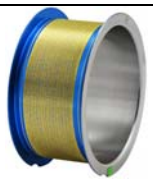
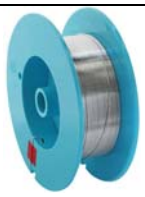
Spools



Spool Dimensions

Material	Type	A Flange Diameter	B Shaft Diameter	C Hub Diameter	D Hub Thickness	E Winding Width	F Overall Width	Style	Part Code
Aluminum	Standard Anodized Hub	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2W	A
		58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4	B
	Conductive Nickel Hub	58.5mm	48.8mm	50.3mm	0.75mm	26.4mm	27.9mm	AL-2WNi	C
		58.5mm	48.8mm	50.3mm	0.75mm	45.5mm	47.0mm	AL-4WNi	N
Polycarbonate	Anti-static	88mm 89mm	10mm 10mm	50mm 71mm	3mm 3mm	25mm 25mm	31mm 31mm	No.88 No.88B	P
		88mm	11mm	50mm	3mm	31mm	37mm	No.88K	K
		120mm	10mm	54mm	4mm	30mm	38mm	No.120	R
		120mm	11mm	64mm	4mm	30mm	38mm	No.120K	T

Spools No.88K and No.120 and No.120K are Clear Polycarbonate.
Spools No.88, No.88B are Blue Polycarbonate.

Spool A	Spool B	Spool C	Spool N		Spool P	Spool K / R / T
						
AL-2(W) **Aluminum** **2" x 1"**	**AL-4** **Aluminum** **2" x 2"**	**AL-2WNi** **Conductive** **2" x 1"**	**AL-4WNi** **Conductive** **2" x 2"**		**P=No.88/88B** **Polycarbonate**	**K=No.88K** **R=No.120** **T=No.120K** **Polycarbonate**

Note: Half-inch rewind spooling service available from TopLine.
See www.topline.tv/Tanaka_Half_Inch.html

Wire Diameter Tolerance

± Tolerance Table

Alloy	Ø Diameter	Tolerance	Spool
Au Gold Model GBC , GBE , GFC, GFD, GHA-2 , GLD-H, GLF , GMB, GMG , GMH-2, GPG-2 , GPH, GSA , GSB, AuR	Ø 12.5µm ~ 38µm (Ø 0.5 ~ 1.5 mil)	±1 µm	AL2 AL-4
	Ø 40µm ~ 50µm (Ø 1.6 ~ 2.0 mil)	±2 µm	
	Ø 65µm ~ 100µm (Ø 2.5 ~ 4.0 mil)	±3 µm	
	Ø 125µm ~ 150µm (Ø 5.0 ~ 6.0 mil)	±5 µm	Ask
	Ø 175µm ~ 200µm (Ø 7.0 ~ 8.0 mil)	±7 µm	
	Ø 250µm (Ø 10 mil)	±10 µm	
Ag Silver Model SEA, SEB, SEC	Ø 15µm ~ 38µm (Ø 0.6 ~ 1.5 mil)	±1 µm	AL2 AL-4
	Ø 40µm ~ 50µm (Ø 1.6 ~ 2.0 mil)	±2 µm	
Al-1% Si Model TABN, TABW	Ø 15µm ~ 38µm (Ø 0.6 ~ 1.5 mil)	±1 µm	AL2 AL-4
	Ø 40µm ~ 50µm (Ø 1.6 ~ 2.0 mil)	±2 µm	
	Ø 80µm (Ø 3.0 mil)	±3 µm	
Power Model TANW and CP-1	Ø 100µm ~ 175µm (Ø 4.0 ~ 7.0 mil)	±5 µm	No. 88K Polycarbonate
	Ø 200µm ~ 450µm (Ø 8.0 ~ 18 mil)	±7 µm	
	Ø 500µm ~ 600um (Ø 20 ~ 24 mil)	±10 µm	
Cu Copper Bare & Plated Model CLR-1AT CA-1 , CFB-1	Ø 15µm ~ 38µm (Ø 0.6 ~ 1.5 mil)	±1 µm	AL-4(Ni) Conductive
	Ø 40µm ~ 50µm (Ø 1.6 ~ 2.0 mil)	±2 µm	
	Ø 60µm ~ 70µm (Ø 2.4 ~ 2.8 mil)	±3 µm	
Flat Al Ribbon Model TABR	Width 0.75mm (30 mil) Thick 0.1mm (4 mil)	W: ±0.050mm T: ±0.010mm	No. 88 No. 88B Polycarbonate
	Width 1.0mm (40 mil) Thick 0.1mm (4 mil)	W: ±0.050mm T: ±0.010mm	
	Width 1.5mm (60 mil) Thick 0.2mm (8 mil)	W: ±0.075mm T: ±0.020mm	
	Width 2.0mm (80 mil) Thick 0.25mm (10 mil)	W: ±0.10mm T: ±0.025mm	

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Fusing Current
Small Wire

Alloy	Wire Type	Wire Diameter Ø um	2.0mm Length	4.0mm Length	6.0mm Length
Gold Au	4N GSA, M3, GLD-H, GFD, GLF, GMH-2 , C, Y, FA,	Ø18 um	0.70 A	0.35 A	0.24 A
		Ø20 um	0.87 A	0.43 A	0.29 A
		Ø25 um	1.36 A	0.68 A	0.45 A
		Ø50 um	5.00 A	2.50 A	1.67A
	2N GBC, GPH, GPG-2	Ø18 um	0.62 A	0.31 A	0.21 A
		Ø20 um	0.77 A	0.38 A	0.26 A
		Ø25 um	1.20 A	0.60 A	0.40 A
Copper Cu	CLR1A-T, CFB-1	Ø18 um	0.81 A	0.41 A	0.27 A
		Ø20 um	1.00 A	0.50 A	0.24 A
		Ø25 um	1.57 A	0.78 A	0.52 A
		Ø38 um	3.00 A	1.50 A	1.00 A
		Ø50 um	7.40 A	3.70 A	2.50 A
	CA-1	Ø18 um	0.76 A	0.38 A	0.25 A
		Ø20 um	0.94 A	0.47 A	0.31 A
		Ø25 um	1.46 A	0.73 A	0.49 A
		Ø50 um	6.40 A	3.20 A	2.20A
Silver Ag	SEA	Ø20 um	0.48 A	0.24 A	0.16 A
		Ø25 um	0.75 A	0.37 A	0.25 A
	SEB	Ø20 um	0.67 A	0.34 A	0.22 A
		Ø25 um	1.05 A	0.53 A	0.35 A
	SEC	Ø20 um	0.84 A	0.42 A	0.28 A
		Ø25 um	1.32 A	0.66 A	0.44 A
Aluminum Al-Si1%	TABN	Ø25 um	0.98 A	0.49 A	0.33 A

IMPORTANT: Fusing Current data is provided only for reference without guarantee of accuracy. Data subject to change based on environmental factors such as molding compound and substrate material.

Fusing Current
Power Wire

Alloy	Wire Type	Wire Size W x Th	2.0mm Length	10mm Length	20mm Length
Gold Au Ribbon	AuR	25 x 12.7 um	0.8 A	0.18 A	-
		38 x 12.7 um	1.2 A	0.27 A	-
		50 x 12.7 um	1.7 A	0.36 A	-
		75 x 12.7 um	2.5 A	0.54 A	-
		100 x 12.7 um	3.2 A	0.72 A	-
		125 x 12.7 um	4.0 A	0.90 A	-
		150 x 12.7 um	4.9 A	1.08 A	-
		75 x 25 um	4.8 A	1.08 A	-
		100 x 25 um	6.3 A	1.44 A	-
		125 x 25 um	7.9 A	1.80 A	-
		150 x 25 um	9.6 A	2.16 A	-
		200 x 25 um	12.9 A	2.88 A	-
		250 x 25 um	16.2 A	3.59 A	-

Alloy	Wire Type	Wire Size W x Th	6.0mm Length	10mm Length	20mm Length
Aluminum Al Ribbon	TABR	750 x 100 um	24.0 A	16.4 A	10.6 A
		1000 x 100 um	32.3 A	21.8 A	14.2 A
		1500 x 100 um	48.5 A	32.7 A	21.2 A
		1500 x 200 um	97.0 A	65.4 A	42.5 A
		2000 x 200um	129.4 A	87.3 A	56.7 A
Aluminum Power Wire	TANW	Ø100 um	-	-	2.9 A
		Ø200 um	-	-	7.0 A
		Ø300 um	22.8 A	16.0 A	12.9 A
		Ø400 um	40.6 A	25.8 A	19.7 A
		Ø500 um	63.5 A	40.4 A	28.9 A
Copper Power Wire	CP-1	Ø100 um	-	4.0 A	-
		Ø300 um	-	22.0 A	-
		Ø350 um	-	29.0 A	
		Ø400 um	-	37.0 A	
		Ø450 um	-	45.0 A	
		Ø500 um	-	55.0 A	

IMPORTANT: Fusing Current data is provided only for reference without guarantee of accuracy. Data subject to change based on environmental factors such as molding compound and substrate material.

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Tanaka Type & Order Code

Order Code	Tanaka Type	Alloy	Application	Catalog Page	Standard Spool
300	GSA	Au 4N	Ball or Wedge	4~5	AL-2 and AL-4
301	GBE	Au 4N	Bumping Wire	20~21	AL-2 and AL-4
302	GMH-2	Au 4N	High Strength	10~11	AL-2 and AL-4
303	M3	Au 4N	Standard Wire	16~17	AL-2 and AL-4
304	GPG-2	Au 2N	High Reliability	12~13	AL-2 and AL-4
305	GBC	Au 2N	High Reliability	18~19	AL-2 and AL-4
306	GFD	Au 4N	Fine Pitch	Web Page	AL-2 and AL-4
307	GLF	Au 4N	Low Loop	8~9	AL-2 and AL-4
308	GPH	Au 2N	High Reliability	14~15	AL-2 and AL-4
309	GLD-H	Au 4N	Wedge to Wedge	6~7	AL-2 and AL-4
316	AuR	Au 4N	Ribbon 2" Spool	42~43	AL-2 and AL-4
326	AuR	Au 4N	Ribbon 1/2" Spool	42~43	1/2" Rewind Service
330	FA	Au 4N	Soft Touch	Web Page	AL-2 and AL-4
331	Y	Au 4N	Power Gold	22~23	P and AL-4
332	GMG	Au 4N	High Strength	Call TopLine	AL-2 and AL-4
333	GMH	Au 4N	High Strength	Call TopLine	AL-2 and AL-4
334	GFC	Au 4N	Fine Pitch	Call TopLine	AL-2 and AL-4
335	GPG	Au 2N	High Reliability	Call TopLine	AL-2 and AL-4
336	GSB	Au 4N	Stable Stitch	Call TopLine	AL-2 and AL-4
337	GMB-2	Au 4N	Smart Card	Call TopLine	AL-2 and AL-4
338	GHA-2	Au 4N	High Loop	Call TopLine	AL-2 and AL-4
339	GL-2	Au 4N	High Strength	Call TopLine	AL-2 and AL-4
340	C	Au 4N	Legacy	Call TopLine	AL-2 and AL-4
342	AuW	Au 4N	High Power	Call TopLine	X000002
353	AuR-3	Au 4N	Ribbon Be Doped	42~43	AL-2 and AL-4
388	AuC	Au 4N	Slit Cut Ribbon	Web Page	Pancake 2”
402	TABR	Al 4N	Ribbon	40~41	No.88K, No.120
403	TABN	Al 1%Si	With Nickel	34~35	AL-2 and AL-4
404	TABW	Al 1%Si	Without Nickel	34~35	AL-2 and AL-4
405	TANW-SOFT	Al	Power Soft BL	36~39	88K and 120K
406	TANW-MID	Al	Power Medium BL	36~39	88K and 120K
407	TAND-HARD	Al	Power Hardest BL	36~39	88K and 120K
501	SEA	Silver Alloy	Original	24~25	AL-2 and AL-4
502	SEB	Silver Alloy	Low Resistivity	24~25	AL-2 and AL-4
503	SEC	Silver Alloy	Softer FAB	24~25	AL-2 and AL-4
505	AgC	Silver Ribbon	Slit Cut Ribbon	44~45	Ask
509	LC	Silver Clad Gold	Clad Wire	Web Page	AL-2 and AL-4
700	CLR-1AT	Cu-Pd 4N	Palladium Coated	26~27	AL4 (WNi)
701	CA-1	Copper Alloy 2N	Bare	28~29	AL4 (WNi)
702	CFB-1	Cu Standard	Bare	30~31	AL4 (WNi)
703	CHA	Heavy Power	Bare	Discontinued	AL4 (WNi)
704	CHR-2BT	Cu-Pd 4N	Palladium Coated	-	AL4 (WNi)
705	CHR-5BT	Cu-Pd 3N	Palladium Coated	-	AL4 (WNi)
706	CHR-6BT	Cu-Pd 2N	Palladium Coated	-	AL4 (WNi)
707	CP-1	Cu - 4N	Heavy Power	32~33	No.88
708	-	-	-	-	-
709	-	-	-	-	-
773	CPR-1	Cu - 4N	Copper Ribbon	Discontinued	No.88

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Wire Bondability to Bond Pads

Bonding with Gold Wire (Au)

Wire	Chip Die Pad	Lead Frame Or Substrate	Bond Finger	Component	Bondability	Comments
GOLD Au	Al	BT Organic	Ni/Au	BGA	Yes	Recommended minimum Au plating 0.3um thickness to prevent Ni oxide forming on the bond fingers.
	Cu	BT Organic	Ni/Au	BGA	Caution	This combination is problematic. Use caution to control process window. Possible oxidation on bond pads.
	Al	Cu Lead Frame	NiPdAu	QFN	Yes	4N Au wire is preferred. 2N Au wire is a harder alloy and requires more bonding force. 2N requires ultrasonic for 2nd bond which might cause possible bond finger vibration and "Non-Stick on Lead" (NSOL). Lead frame can be tapped to reduce vibration.
	Cu	Cu Lead Frame	NiPdAu	QFN	Caution	Combination is problematic. Use caution to control process window. Possible oxidation on bond pads
	Al	Cu Lead Frame	Spot Ag	QFN	Yes	This combination is mature and stable process. No major issues are anticipated.
	Cu	Cu Lead Frame	Spot Ag	QFN	Caution	Combination is problematic. Use caution to control process window. Possible oxidation on bond pads

Bonding with Silver Alloy Wire (Ag)

Wire	Chip Die Pad	Lead Frame Or Substrate	Bond Finger	Component	Bondability	Comments
Silver Ag	Al	BT	Ni/Au	BGA	Yes	
	Cu	BT	Ni/Au	BGA	Yes	The main concern is a risk of Cu bond pad oxidation. Remedy might be to use OSP Cu.
	Al	Cu	NiPdAu	QFN	Yes	Only concern is risk of Cu lead frame oxidation layer
	Cu	Cu	NiPdAu	QFN	Yes	Concern is risk of Cu lead frame oxidation layer
	Al	Cu	Spot Ag	QFN	Yes	Only concern is risk of Cu lead frame oxidation layer
	Cu	Cu	Spot Ag	QFN	Yes	Concern is risk of Cu lead frame oxidation layer

Bonding with Copper Wire (Cu)

Wire	Chip Die Pad	Lead Frame Or Substrate	Bond Finger	Component	Bondability	Comments
Copper Cu	Al	BT	Ni/Au	BGA	No	Recommended to use Palladium Coated Copper Wire
	Cu	BT	Ni/Au	BGA	No	Recommended Palladium Coated Copper wire with OSP on copper bond pads.
	Al	Cu	NiPdAu	QFN	Yes	Very narrow window for proper bonding. Suggested to use Palladium Coated Copper wire.
	Cu	Cu	NiPdAu	QFN	Caution	This combination is problematic. Use caution to control process window. Possible oxidation on the bond pads.
	Al	Cu	Spot Ag	QFN	Yes	Stable Process.
	Cu	Cu	Spot Ag	QFN	Caution	This combination is problematic. Use caution to control process window. Possible oxidation on the bond pads.

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