

YIWU TONGKE TRADING FIRM (CHINA)

TUNGSTEN ELECTRODE

PRODUCT CATALOG

Reliable materials for precision welding

Pure · Thoriated · Ceriated · Lanthanated · Zirconiated · Yttriated

Ø 1.0 – 6.4 mm · L 150 / 175 mm · OEM & custom sizes

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NEUTRAL EXPORT PACKAGING · OEM AVAILABLE

Who we are and how we serve international welding markets

ABOUT YIWU TONGKE TRADING FIRM

Yiwu Tongke Trading Firm (China) is a professional supplier and exporter of tungsten, titanium and other non-ferrous metal products. We focus on providing high-quality welding consumables and reliable supply-chain services to global customers.

With strong supply chains in China, we offer a wide range of metal materials — from standard sizes to customized specifications — for industrial welding, fabrication and equipment applications.

Our goal is to be a long-term, dependable partner for importers and distributors worldwide.

Professional Supply Chain

Direct access to established tungsten electrode manufacturers in China

Stable Quality

Ground and cleaned electrodes, diameter tolerance h7

Competitive Price

Trading-firm flexibility for mixed orders and volumes

Global Service

Export documents, OEM packing and after-sale support



Tungsten electrode series in neutral export packaging

TUNGSTEN ELECTRODE PRODUCT OVERVIEW

YIWU TONGKE TRADING FIRM

Six material families covering AC and DC welding needs

Type	Family	Color	Main Composition	Current & Typical Duty
WP	Pure Tungsten	Green	W ≥ 99.5%	AC — aluminium & magnesium
WT20	Thoriated	Red	2% ThO ₂	DCEN — steel & alloy, high current
WC20	Ceriated	Gray	2% CeO ₂	DCEN — low current & thin sheet
WL15 / WL20	Lanthanated	Blue	La ₂ O ₃ 1.5–2%	DC & AC — general purpose
WZ8	Zirconiated	Brown	ZrO ₂ 0.8%	AC & DC — high current, Al/Mg
WY20	Yttriated	White	Y ₂ O ₃ 2%	DC — precision & critical welding

COLOR CODING AT A GLANCE



All types are supplied ground and cleaned, diameter tolerance h7, length tolerance ±1 mm.
Standard diameters: 1.0 / 1.6 / 2.0 / 2.4 / 3.2 / 4.0 / 4.8 / 5.0 / 6.4 mm.
Standard lengths: 150 mm and 175 mm; other lengths and mixed sizes available on request.

SELECTION GUIDE

Choose the right tungsten electrode for your application

Type	Color	Composition	Current	When To Choose It
WP	Green	Pure W ≥ 99.5%	AC (mainly)	Aluminium & magnesium with AC; ball tip forms naturally
WT20	Red	2% ThO ₂	DCEN	Steel, stainless, alloy; high current capacity, easy starting
WC20	Gray	2% CeO ₂	DCEN (low I)	Thin materials, low current, precision DC welding
WL15/20	Blue	La ₂ O ₃ 1.5–2%	DC & AC	Versatile general purpose; manual & automated, wide range
WZ8	Brown	ZrO ₂ 0.8%	AC & DC	High-current AC on Al/Mg; contamination resistance
WY20	White	Y ₂ O ₃ 2%	DC (mainly)	Precision, aerospace, nuclear and critical applications

QUICK RULES OF THUMB

- Welding aluminium on AC? → WP or WZ8 (WZ8 for higher current and cleaner beads).
- Steel on DC, maximum arc stability? → WL15/WL20, a strong alternative to thoriated electrodes.
- Very low current, thin sheet? → WC20 starts easiest at low amperage.
- Cross-check amperage ranges with your welding machine before ordering — recommended current values are being finalized (To be confirmed).

WP — PURE TUNGSTEN ELECTRODE

YIWU TONGKE TRADING FIRM

High purity tungsten for stable AC welding

TECHNICAL SPECIFICATION

Parameter	Specification
Color Code	Green
Composition	Pure tungsten W ≥ 99.5%
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	AC (mainly) / DC
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- Stable ball tip formation on AC
- Clean, oxide-free weld beads
- Good arc steadiness on aluminium
- Suitable for AC welding of light alloys

RECOMMENDED APPLICATIONS

Aluminium, magnesium and their alloys; AC welding applications.



Tip color: Green

WT20 — THORIATED TUNGSTEN ELECTRODE

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Excellent arc starting and high current capacity

TECHNICAL SPECIFICATION

Parameter	Specification
Color Code	Red
Composition	2% ThO ₂ (nominal, per type designation)
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	DCEN (mainly)
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- High current load capacity
- Easy arc starting, stable arc
- Long service life, low burn-off
- Widely proven on DC steel welding

RECOMMENDED APPLICATIONS

Stainless steel, carbon steel, alloy steel; nickel and titanium. Note: contains thorium — handle and transport per local regulations.



Tip color: Red

WC20 — CERATED TUNGSTEN ELECTRODE

YIWU TONGKE TRADING FIRM

Easy arc starting, stable performance at low current

TECHNICAL SPECIFICATION

Parameter	Specification
Color Code	Gray
Composition	2% CeO ₂ (nominal, per type designation)
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	DCEN (low current performance)
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- Excellent low-current arc starting
- Low burn-off, long tip life
- Non-radioactive — popular substitute for thoriated
- Re-ignites easily on automated cycles

RECOMMENDED APPLICATIONS

Thin sheet and precision DC welding; low-current applications on steel, stainless and alloy materials.



Tip color: Gray

WL15 / WL20 — LANTHANATED TUNGSTEN ELECTRODE

YIWU TONGKE TRADING FIRM

Excellent arc stability and long service life

TECHNICAL SPECIFICATION

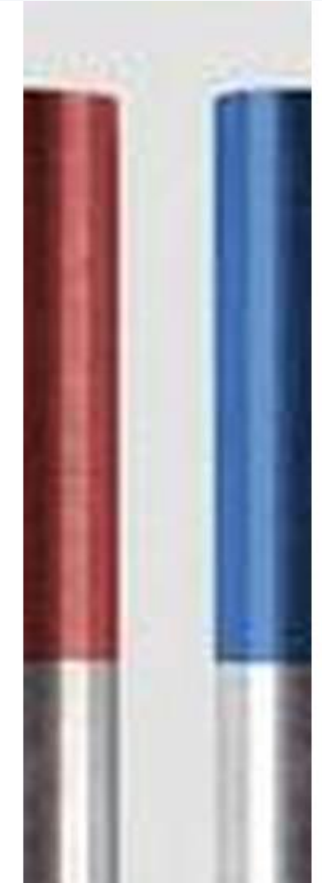
Parameter	Specification
Color Code	Blue (WL series)
Composition	La ₂ O ₃ 1.5–2% (nominal, per type designation)
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	DC & AC
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- Wide current range, DC and AC
- Excellent arc stability and re-ignition
- Long service life
- Strong alternative to thoriated electrodes

RECOMMENDED APPLICATIONS

Manual and automated welding of stainless steel, carbon steel, titanium, nickel and their alloys.



Tip color: Blue (WL series)

WZ8 — ZIRCONIATED TUNGSTEN ELECTRODE

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Good performance in AC and high current applications

TECHNICAL SPECIFICATION

Parameter	Specification
Color Code	Brown
Composition	ZrO ₂ 0.8% (nominal, per type designation)
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	AC & DC
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- Maintains a stable rounded ball tip
- High current capacity on AC
- Good resistance to weld contamination
- Tough tip, less spitting

RECOMMENDED APPLICATIONS

Aluminium and magnesium alloys; AC welding and high-current applications.



Tip color: Brown

WY20 — YTTRIATED TUNGSTEN ELECTRODE

YIWU TONGKE TRADING FIRM

For high performance and critical applications

TECHNICAL SPECIFICATION

Parameter	Specification
Color Code	White
Composition	Y ₂ O ₃ 2% (nominal, per type designation)
Standard	AWS A5.12 / ISO 6848
Available Diameter	1.0 – 6.4 mm
Available Length	150 / 175 mm (other lengths on request)
Current Type	DC (mainly)
Recommended Current	To be confirmed
Packaging	10 pcs/plastic box · 100 pcs/box · MOQ 100 pcs

MAIN FEATURES

- High temperature resistance
- Very stable, concentrated arc
- Long electrode life under demanding duty
- Smooth bead appearance on critical welds

RECOMMENDED APPLICATIONS

Precision welding, aerospace, nuclear, chemical and other critical DC applications.



Tip color: White

SIZE & LENGTH TABLE

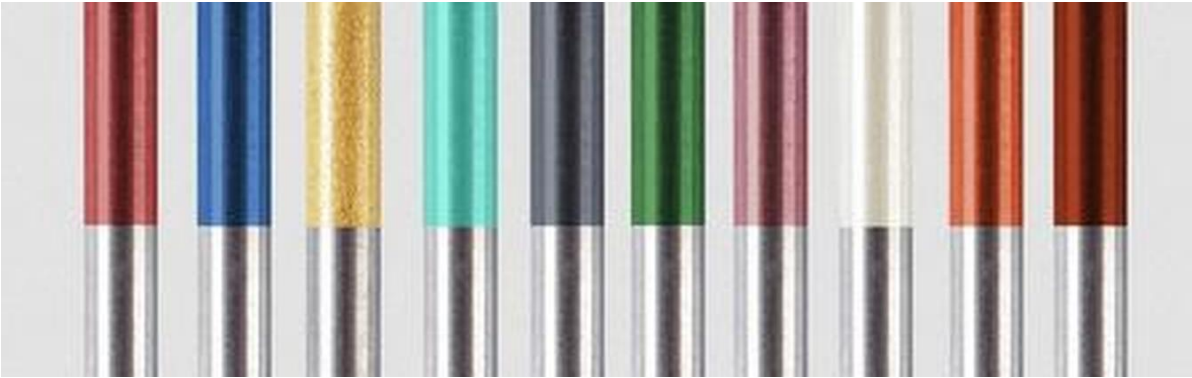
Standard diameters and lengths (mm)

Diameter (mm)	Length 150 mm	Length 175 mm
1.0	✓	✓
1.6	✓	✓
2.0	✓	✓
2.4	✓	✓
3.2	✓	✓
4.0	✓	✓
4.8	✓	✓
5.0	✓	✓
6.4	✓	✓

Other sizes and lengths can be customized on request.

MANUFACTURING TOLERANCES

Parameter	Specification
Diameter tolerance	h7 (precision ground)
Length tolerance	±1 mm (standard 150 / 175 mm)
Surface finish	Ground (bright) / cleaned
Tip preparation	Flat / pointed / balled (by type & current)
Common retail pack	2.4 × 150 (175) mm, 10 pcs/box



Full color range of electrode tips (reference)

BASE MATERIAL & STANDARDS

Parameter	Specification
Standard	AWS A5.12 / ISO 6848
Tungsten (W) purity	≥ 99.95%
Manufacturing process	Powder metallurgy · sintering · centerless grinding
Diameter tolerance	h7
Length tolerance	±1 mm

COMPOSITION BY TYPE

Type	Main Oxide	Content
WP	Pure W	≥ 99.5%
WT20	ThO ₂	2% (nominal)
WC20	CeO ₂	2% (nominal)
WL15 / WL20	La ₂ O ₃	1.5% / 2% (nominal)
WZ8	ZrO ₂	0.8% (nominal)
WY20	Y ₂ O ₃	2% (nominal)

Items pending confirmation

Recommended welding current (A) by diameter · full chemical composition incl. impurity limits · specific AWS/ISO class designations. Values marked "To be confirmed" in this catalog will be provided upon request once verified.

- Composition values are nominal, according to each type designation; certified analysis is available with each shipment on request.
- Electrodes are supplied ground, cleaned and ready for use; tip grinding service can be arranged.
- Thoriated (WT20) products contain a small amount of thorium oxide — please observe local handling, storage and transport regulations.

STANDARD PACKAGING

- 10 pcs per plastic box — the standard retail pack for all types.
- 100 pcs per box — economical pack for workshop and distributor use.
- Bulk carton packing for container orders; mixed sizes accepted within MOQ.
- Each pack clearly labeled with type, diameter and length.

OEM & CUSTOMIZATION

- OEM color box and label design with your brand.
- Neutral packaging without any manufacturer branding.
- Custom sizes, lengths and specifications on request.
- Customized packaging also available for your brand.



Neutral 10-piece boxes in four color codes (reference)

1

Send your requirement

Tell us the type, diameter, length and quantity you need (mixed sizes accepted).

2

Quotation & confirmation

We confirm specification, price and lead time for your order.

3

Production & inspection

Order is prepared and checked before packing.

4

Shipping

By sea, air or express courier according to your requirement.

5

Documentation

Export documents and certificates of analysis provided as needed.

COMMERCIAL TERMS

Parameter	Specification
MOQ	100 pcs (mixed sizes accepted)
Dispatch time	5–10 working days
Shipping	Sea / air / express courier
Payment	Negotiable — contact us
Samples	Available on request
Documents	Export documents & COA on request

Prices are quoted per order and are not published in this catalog — contact us for a current quotation.

YIWU TONGKE TRADING FIRM (CHINA)

Your Reliable Partner in Metal Materials

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Contact us for quotation and samples

Type · diameter · length · quantity — we will reply
with specification, price and lead time.