



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Fiber Optics, Plastic Types FUR, FUT

CARLO GAVAZZI



- Inner fiber diameter \varnothing 0.25, 0.5 or 1.0 mm
- Outer fiber diameter \varnothing 2.2, 1.25 mm
- Bending radius 10, 15 or 25 mm
- For use with fiber optic sensor amplifier FA series
- Overmoulding protection for better curvature and protection from breakage of fiber
- High tensile strength of 8 kg ensuring reliability and durability
- 2000 mm fiber length



Over moulding for better curvature protection

Ordering Key

FURC6-20/S10

Fiber unit

Fiber type

- R Reflective
- T Through-beam

Fiber diameter

- O 1.0 mm/ \varnothing 2.2
- C 0.25 mm x 10/0.5 mm x 1
- A 0.25 mm/ \varnothing 1.25
- D 0.5 mm/ \varnothing 1.25
- S 0.5 mm/ \varnothing 2.2

Head diameter

- 6 M6
- 4 M4
- 3 M3

Fiber length 2000 mm

Options

- /E Extended range
- /A Angled
- /S10 Sleeve 10 mm
- /S20 Sleeve 20 mm
- /S40 Sleeve 40 mm
- /S90 Sleeve 90 mm

Note:

1. Not every combination is available.
2. Please see Type Selection section to see availability
3. Sleeve option is not available if you choose extended range (/E) or angled (/A) version

General Specifications

Temperature range

Operating temperature

-55 to +70°C (-67 to +158°F)

Materials

Fiber
Sheath
Detection head

PMMA
PE (polyethylene)
SUS303

Note 3:

FURO6-20/E, FURD4-20/E, FURD3-20/E, FUTO4-20/E, FUTO3-20/E head is made of nickel plated brass

Type Selection

Reflective types							
Inner diameter	Max. detection distance (mm)*	Smallest detectable object	Min. bend radius	Dimensions (mm)**	Weight (g)	Ordering key	
Ø1.0 x 2	90	Ø0.50	R25		38	FURO6-20 FURO6-20/S10 FURO6-20/S20 FURO6-20/S40 FURO6-20/S90	
Ø1.0 x 2	60	Ø0.50	R25		30	FURO6-20/A	
Ø1.0 x 2	100	Ø0.50	R25		38	FURO6-20/E***	
Ø1.0 x 1, Ø0.265 x 16	90	Ø0.50	R25		38	FURC6-20 FURC6-20/S10 FURC6-20/S20 FURC6-20/S40 FURC6-20/S90	
Ø0.5 x 1, Ø0.25 x 10	40	Ø0.05	R15		25	FURC4-20 FURC4-20/S10 FURC4-20/S20 FURC4-20/S40 FURC4-20/S90	
Ø0.5 x 1, Ø0.25 x 10	20	Ø0.05	R15		30	FURC4-20/A	
Ø0.5 x 1, Ø0.25 x 10	40	Ø0.05	R15		25	FURC3-20 FURC3-20/S10 FURC3-20/S20 FURC3-20/S40 FURC3-20/S90	
Ø0.5 x 1, Ø0.25 x 10	20	Ø0.05	R15		29	FURC3-20/A	
Ø0.5 x 2	20	Ø0.10	R15		25	FURD4-20 FURD4-20/S10 FURD4-20/S20 FURD4-20/S40 FURD4-20/S90	
Ø0.5 x 2	20	Ø0.10	R15		20	FURD4-20/A	

*note 1 : Detection distance in the table is based on FA1 amplifier with setting; response time at 5000µs and threshold value at 27 (max setting)

**note 2 : Dimensional drawing shown here is for the standard version (without sleeve).

***note 3 : Head is made of nickel plated brass

Type Selection (cont.)

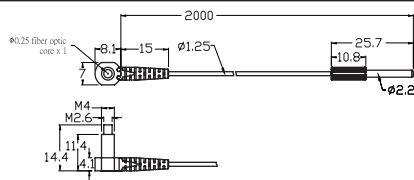
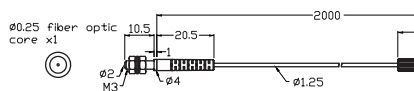
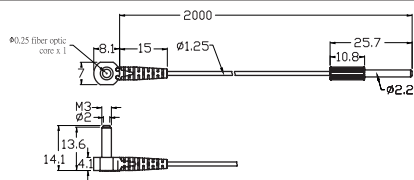
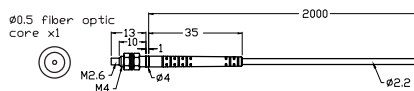
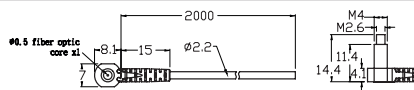
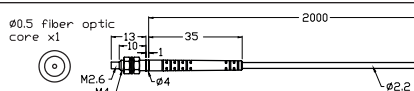
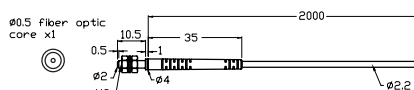
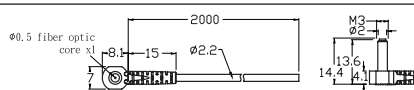
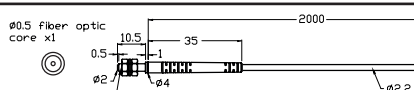
Reflective types							
Inner diameter	Max. detection distance (mm)*	Smallest detectable object	Min. bend radius	Dimensions (mm)**	Weight (g)	Ordering key	
Ø0.5 x 2	30	Ø0.10	R15		25	FURD4-20/E***	
Ø0.5 x 2	20	Ø0.10	R15		24	FURD3-20 FURD3-20/S10 FURD3-20/S20 FURD3-20/S40 FURD3-20/S90	
Ø0.5 x 2	20	Ø0.10	R15		20	FURD3-20/A	
Ø0.5 x 2	30	Ø0.10	R15		24	FURD3-20/E***	
Ø0.25 x 2	7	Ø0.05	R10		16	FURA4-20 FURA4-20/S10 FURA4-20/S20 FURA4-20/S40 FURA4-20/S90	
Ø0.25 x 2	5	Ø0.05	R10		21	FURA4-20/A	
Ø0.25 x 2	7	Ø0.05	R10		16	FURA3-20 FURA3-20/S10 FURA3-20/S20 FURA3-20/S40 FURA3-20/S90	
Ø0.25 x 2	5	Ø0.05	R10		20	FURA3-20/A	
Through-Beam types							
Ø1.0	440	Ø0.50	R25		38	FUTO4-20 FUTO4-20/S10 FUTO4-20/S20 FUTO4-20/S40 FUTO4-20/S90	
Ø1.0	300	Ø0.50	R25		28	FUTO4-20/A	
Ø1.0	490	Ø0.50	R25		38	FUTO4-20/E***	

***note 1** : Detection distance in the table is based on FA1 amplifier with setting; response time at 5000µS and threshold value at 27 (max setting)

****note 2** : Dimensional drawing shown here is for the standard version (without sleeve).

*****note 3** : Head is made of nickel plated brass

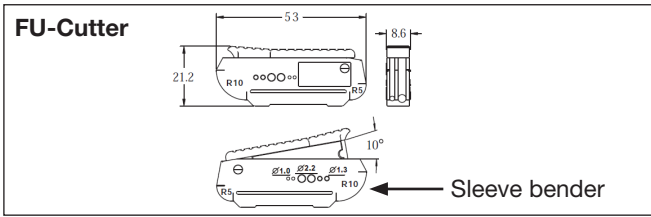
Type Selection (cont.)

Through-Beam types						
Inner diameter	Max. detection distance (mm)*	Smallest detectable object	Min. bend radius	Dimensions (mm)**	Weight (g)	Ordering key
Ø0.25	20	Ø0.03	R10		25	FUTA4-20/A
Ø0.25	30	Ø0.03	R10		20	FUTA3-20 FUTA3-20/S10 FUTA3-20/S20 FUTA3-20/S40 FUTA3-20/S90
Ø0.25	20	Ø0.03	R10		24	FUTA3-20/A
Ø0.5	160	Ø0.05	R15		25	FUTS4-20 FUTS4-20/S10 FUTS4-20/S20 FUTS4-20/S40 FUTS4-20/S90
Ø0.5	130	Ø0.05	R15		30	FUTS4-20/A
Ø0.5	180	Ø0.05	R15		25	FUTS4-20/E
Ø0.5	160	Ø0.05	R15		25	FUTS3-20 FUTS3-20/S10 FUTS3-20/S20 FUTS3-20/S40 FUTS3-20/S90
Ø0.5	130	Ø0.05	R15		29	FUTS3-20/A
Ø0.5	180	Ø0.05	R15		25	FUTS3-20/E


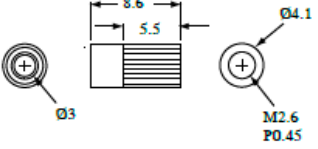

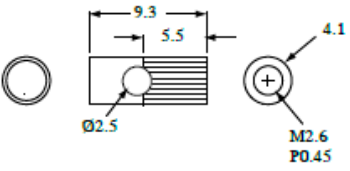

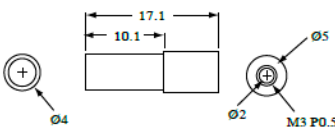

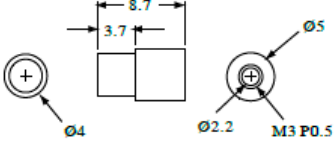

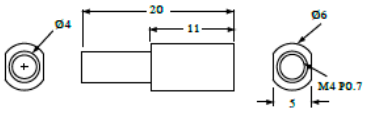
*note 1 : Detection distance in the table is based on FA1 amplifier with setting; response time at 5000µS and threshold value at 27 (max setting)

**note 2 : Dimensional drawing shown here is for the standard version (without sleeve).

Accessories



- 1) Cutter is not included. Sold separately.
- 2) FU-Cutter can also be used as a fiber-unit sleeve bender.

Lenses					
Part No	Description	Usage		Dimensions (mm)	Suitable to be used with
FUT-M4LENS	Through-beam M4 fiber lens	Attaching this lens to the transmitter fiber and to the receiver fiber will increase the scanning distance 4 times.			FUTO4-20 FUTO4-20/A FUTO4-20/E FUTD4-20 FUTD4-20A FUTD4-20/E FUTA4-20/A FUTA4-20 FUTS4-20 FUTS4-20/A FUTS4-20/E
FUT-M4SLENS	Through-beam M4 fiber side lens	The axial fiber unit can be changed to a radial type by attaching this unit to the light emitter or receiver of the fiber unit			FUTO4-20 FUTO4-20/A FUTO4-20/E FUTD4-20 FUTD4-20A FUTD4-20/E FUTA4-20/A FUTA4-20 FUTS4-20 FUTS4-20/A FUTS4-20/E
FUR-M3LENS-2	Reflective M3 fiber lens	The light signal will converge into a 0.5 mm dia. spot, provided the lens is attached to the fiber at a distance of 8 mm.			FURC3-20 FURC3-20/A FURA3-20 FURA3-20/A FURD3-20 FURD3-20/A FURD3-20/E
FUR-M3LENS-1	Reflective M3 fiber lens	The light signal will converge into a 2 mm dia. spot, provided the lens is attached to the fiber at a distance of 8 mm.			FURC3-20 FURC3-20/A FURA3-20 FURA3-20/A FURD3-20 FURD3-20/A FURD3-20/E
FUR-M4LENS	Reflective M4 fiber lens	The light signal will converge into a 0.7 mm dia. spot, provided the lens is attached to the fiber at a distance of 10 mm.			FURD4-20 FURD4-20/A FURD4-20/E FURA4-20/A FURA4-20