

NOTE 1 Please see BF4-IR2IR2 Design Note (ETAD-K0793-00) for main OE/EO device, BF4, incorporated in the BF4-IR2 plug.
BF4-IR2 Design Note will be issued at the end of BF4-IR2 development.

2 This product shall be delivered by packing in the ESD bag.

△ Provide a label on the ESD bag containing the following :
-Lot number

③ The serial number is the unique number to identify the cable number and shall be marked at one of two locations located on the drawing.

Cable diagram

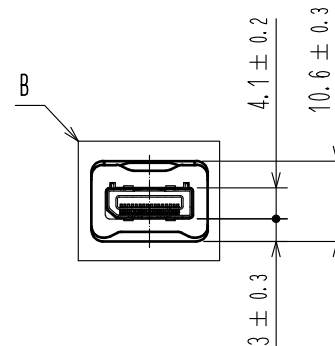
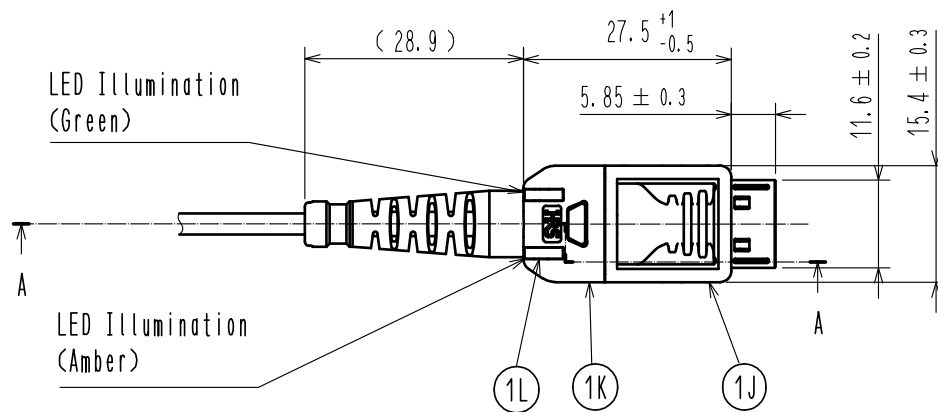
Fiber color of 1st coating	BF4MC-IR2	BF4MC-IR2
Red (Line1)	Tx	Rx
Blue (Line2)	Rx	Tx

Parts list

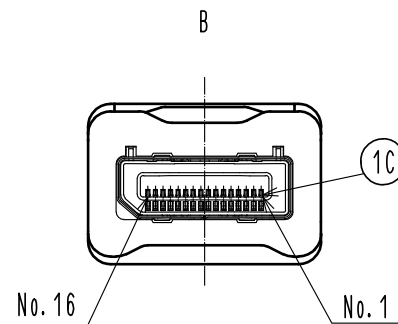
Part No	Parts name	Quantity	Details	Notes
1	BF4-IR2	2	Details in page 2	Built-in BF4MC-TX & BF4MC-RX Suitable connector BF4-IR2-16P-0.5SH
2	Optical fiber cable	1	Details in page 3	Round Cable(Φ2.8mm, 2-Fiber)

UNITS mm	SCALE FREE	COUNT △ 2	DESCRIPTION OF REVISIONS DIS-K-00002297	DESIGNED TY. SATO	CHECKED TS. YAMAZAKI	DATE 20200302
HRS HIROSE ELECTRIC CO., LTD.			APPROVED : YY. HIYAMA 20200210	DRAWING NO. EDC-391584-00-00		
			CHECKED : TS. YAMAZAKI 20200210	PART NO. BF4-IR2IR2-01-1M		
			DESIGNED : TY. SATO 20200210	CODE NO. CL831-1272-0-00		
			DRAWN : SK. AOYAMA 20200207	△ 1/3		

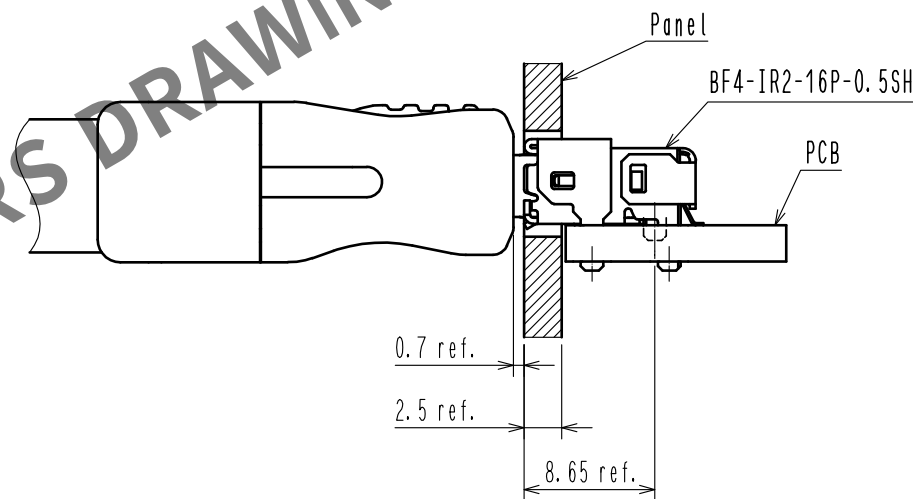
Details of BF4-IR2



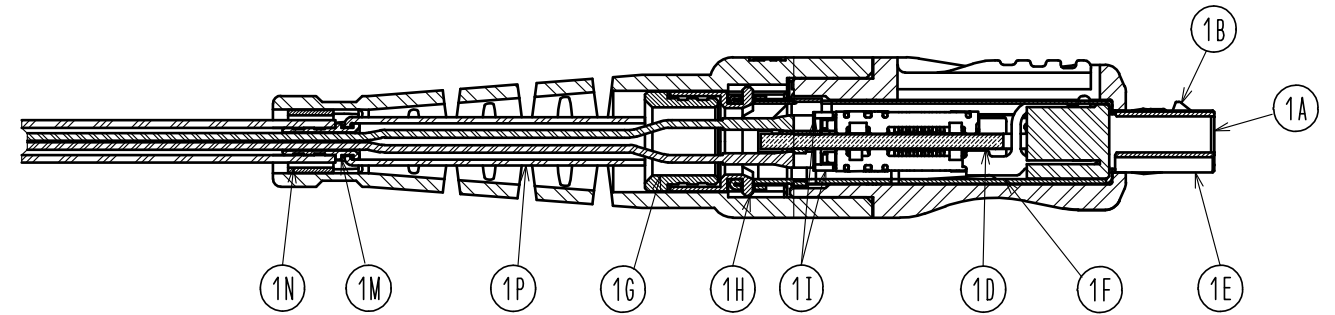
Pin number



Mated Condition



A-A



Parts list

Part No	Parts name	Qty/IR2	Material
1A	S Housing	1	PA (Black)
1B	S Lock Spring	2	Stainless Steel (AU Plating)
1C	S Contact	16	Copper Alloy (AU Plating)
1D	PCBA	1	Including BF4 receptacles
1E	Shield Shell A	1	Stainless Steel (Ni plating)
1F	Shield Shell B	1	Stainless Steel (Ni plating)
1G	Ring	1	Brass (Ni plating)
1H	Fixed Ring	1	Aluminium
1I	BF4 Plug	2	—
1J	S Cover Case A	1	PBT (Black)
1K	S Cover Case B	1	Polyester elastomer (Blue)
1L	Light guiding pipe	2	PC (Transparent)
1M	Cable clammer	1	Brass (Ni plating)
1N	Clamping ring	1	Brass (Ni plating)
1P	Heat shrink tubing	1	Polyolefin (Black)

Pin layout

No	Pin Name	I/O	No	Pin Name	I/O
1	VDD	Power	9	GND	GND
2	VDD	Power	10	EO-DATA-	Input
3	GEN-LEDn	Input	11	EO-DATA+	Input
4	OE-SDn	Output	12	GND	GND
5	ANDATA	Output	13	EO-ACT	Input
6	GND	GND	14	EO-ACTn	Output
7	OE-DATA-	Output	15	AMB-LEDn	Input
8	OE-DATA+	Output	16	N. C.	N. C.

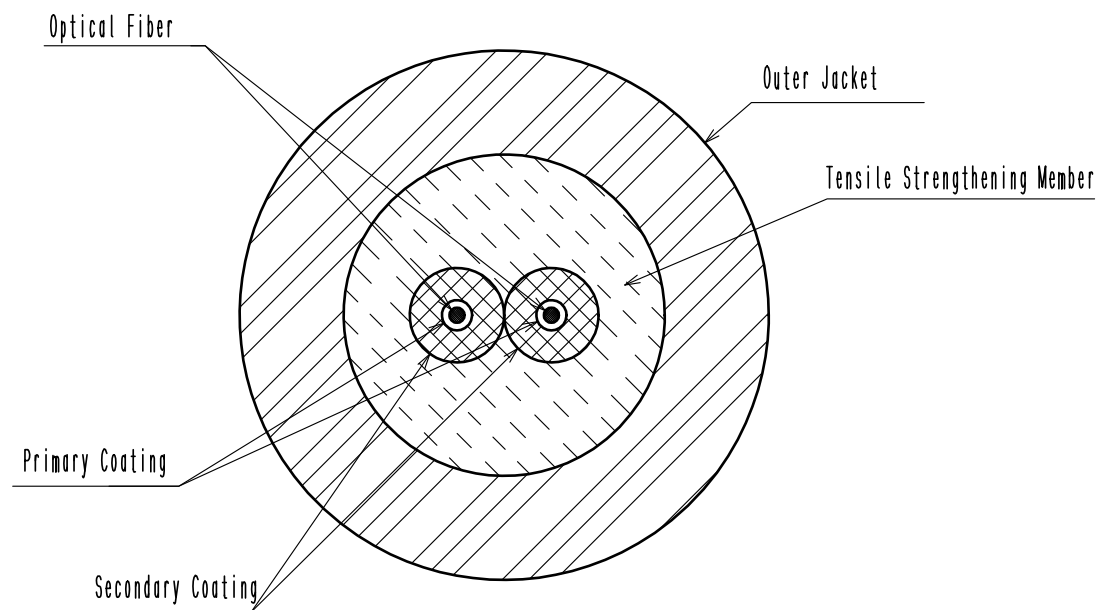
HRS

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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

Details of 2-Fiber Round Cable



Optical Fiber

Fiber Type	GI(50/80)
Material	Silica Glass
N. A.	0.275 ± 0.015
Core Diameter	$50 \pm 5 \mu\text{m}$
Cladding Diameter	$80 \pm 1 \mu\text{m}$
Eccentricity (Core/Cladding)	$< 3 \mu\text{m}$
Core Circularity	$< 6\%$
Cladding Circularity	$< 2\%$

Primary Coating

Material	UV Cureable Resin
Outer Diameter	$165 \pm 10 \mu\text{m}$
Color	Blue / Red

Secondary Coating

Material	Fluororesin
Outer Diameter	$0.5 \pm 0.1 \text{mm}$
Color	Clear

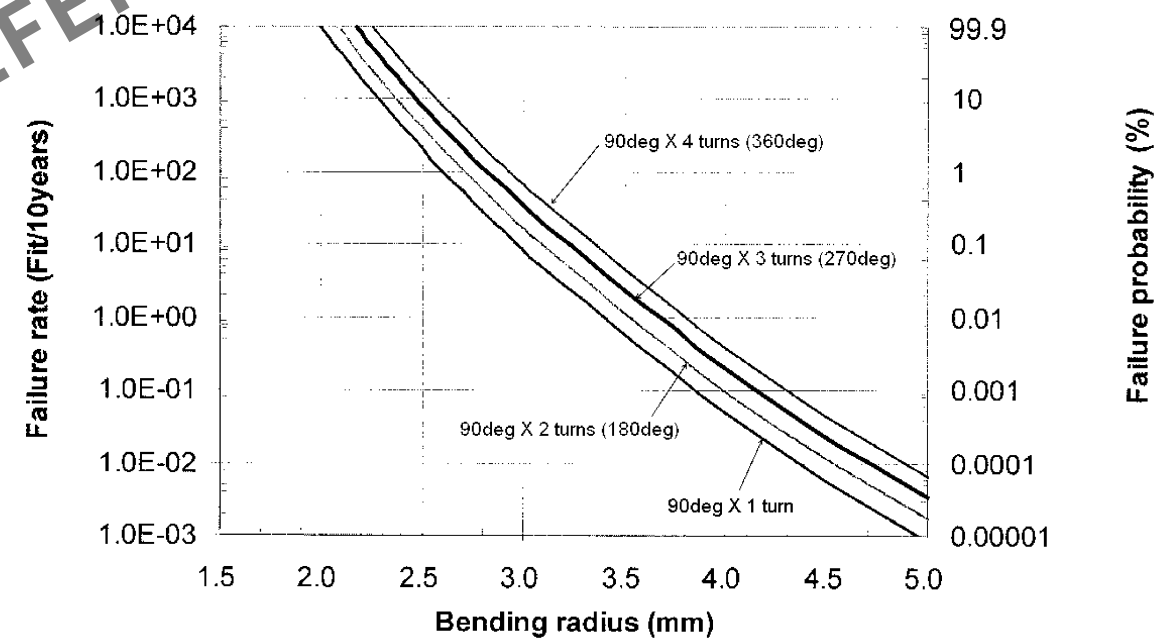
Tensile Strengthening Member

Material	Aramid Fiber (Kevlar)
Color	Yellow

Outer Jacket

Material	PVC
Outer jacket diameter	$2.8 \pm 0.2 \text{mm}$
Color	Orange

Reference Data --- Failure Rate of the Fiber During Static Bending



Note 4 The optical fiber coating contains dibutyltin compounds (DBT) less than 1000ppm as an intentionally-doped catalyser. REACH regulations restricts 1000ppm exceeding DBT.

Note 5 The data is only for technical reference. The data shows the failure rate during static bending of the tight-buffered fiber that does not include outer jacket and strengthening member.

HRS

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