

### Features

- Laser diode with multi-quantum-well structure
- Un-cooled operation at 0~70
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Telcordia Technologies GR-468-CORE
- Single frequency operation with high SMSR
- Fiber pigtailed with FC/ST/SC/MU/LC connector
- Design for Analog fiber-optics application
- RoHS Compliant available

### Absolute Maximum Ratings (Tc=25 °C)

Parameter	Symbol	Rating	Unit
Fiber Output Power	H/2	P <sub>f</sub>	2(H)/2.6(2)
LD Reverse Voltage	V <sub>RLD</sub>	2	V
PD Reverse Voltage	V <sub>RPD</sub>	10	V
PD Forward Current	I <sub>FPD</sub>	2	mA
Operating Temperature	T <sub>opr</sub>	0 ~ 70	
Storage Temperature	T <sub>stg</sub>	-40 ~ 85	

(All optical data refer to a coupled 9/125  $\mu$  m SM fiber)

Optical and Electrical Characteristics (Tc=25 °C)

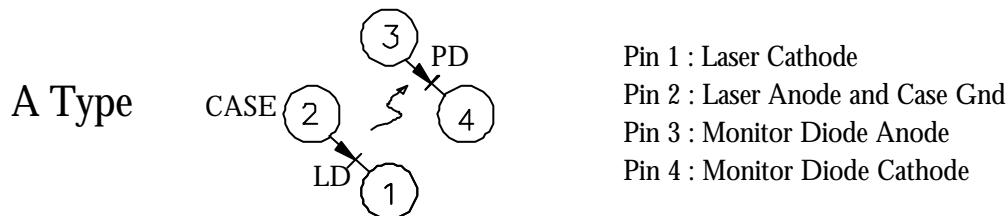
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Threshold Current	I <sub>th</sub>	-	-	20	mA	CW
Operating Current	I <sub>op</sub>	-	35	50	mA	CW
Optical Output Power	H 2	P <sub>f</sub>	1 2	- 2.5	mW	CW, I <sub>th</sub> +25mA, kink free CW, I <sub>th</sub> +30mA, kink free
Operating Voltage	V <sub>F</sub>	-	1.2	1.5	V	CW, P <sub>f</sub> = P <sub>f</sub> (Min)
Peak Wavelength		n-3	n	n+3	nm	Note 4
Side mode Suppression	S <sub>r</sub>	30	35	-	dB	CW, P <sub>f</sub> = P <sub>f</sub> (Min), 0 ~ 70
Optical Isolation	OI	45 30	- -	-	dB	T <sub>c</sub> =25 0 < T <sub>c</sub> < 70
Rise / Fall Time	T <sub>r</sub> /T <sub>f</sub>	-	-	0.3	ns	I <sub>bias</sub> =I <sub>th</sub> , 10~90%
Relative Intensity Noise	RIN	-	-150	-145	dB/Hz	CW
Second Order Distortion	SSO	-	-	-40	dBc	Note1
Third Order Distortion	STO	-	-	-50	dBc	Note1
Monitor Current	I <sub>m</sub>	100	-	1000	$\mu$ A	CW, P <sub>f</sub> = P <sub>f</sub> (Min), V <sub>RPD</sub> = 2V
Monitor Dark Current	I <sub>dark</sub>	-	-	0.1	$\mu$ A	V <sub>RPD</sub> = 5V

Photodiode Capacitance	C	-	6	15	pF	$V_{RPD} = 5V, f = 1MHz$
Tracking Error	$P_f / P_t$	-1.5	-	1.5	dB	APC, 0 ~ 70

**Note:**

1. The laser is modulated with two-carrier tones (  $f_1=13MHz, f_2=19MHz$  ) at OMI=15% per carrier tone.
  2. Pin assignment can be customized.
  3. Specifications subject to change without notice.
  4. Selected wavelength is available for WDM application.
- \* Peak wavelength n=1270;1290;1310;1330;1350;1370;1390;1410;1430;1450;1470;1490  
;1510;1530;1550;1570;1590;1610

## Pin Assignment



## Ordering Information

**C-XXXXA-DFBA-PX-SXXXI/XXX-X-XX**

Wavelength

1310=1310 nm	1470=1470 nm
1330=1330 nm	1490=1490 nm
1350=1350 nm	1510=1510 nm
1370=1370 nm	1530=1530 nm
1390=1390 nm	1550=1550 nm
1410=1410 nm	1570=1570 nm
1430=1430 nm	1590=1590 nm
1450=1450 nm	1610=1610 nm

"A"=Wavelength  $\pm 3nm$

Analog

Package  
P=Pigtail

Pin Assignment  
Blank=A Type

Connector  
FC/ST/SC/MU/LC/Blank

Fiber Output Power  
H/2

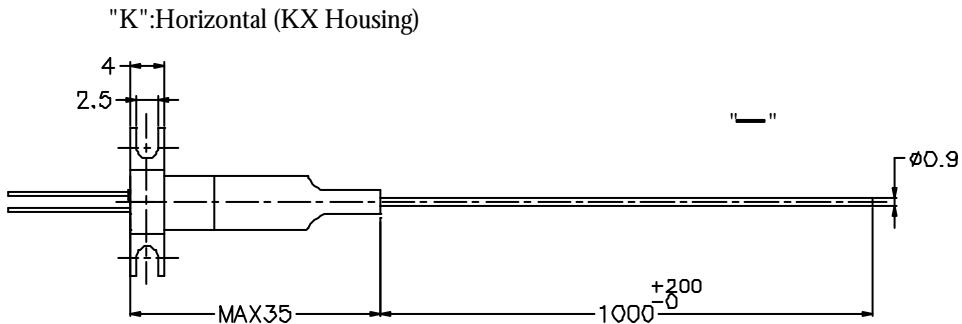
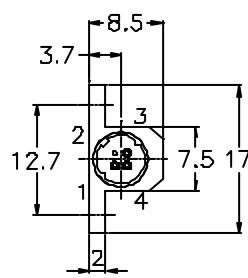
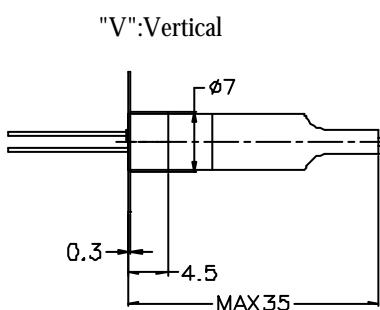
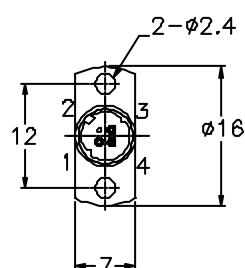
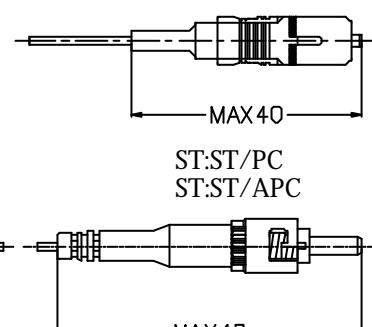
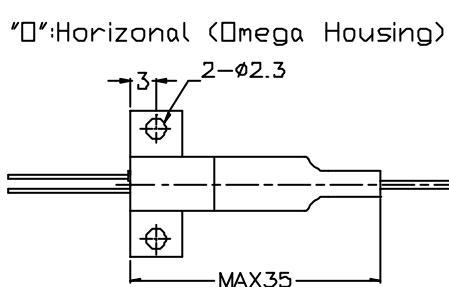
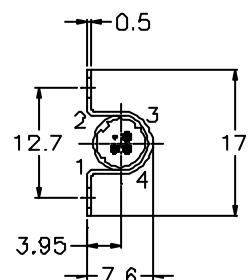
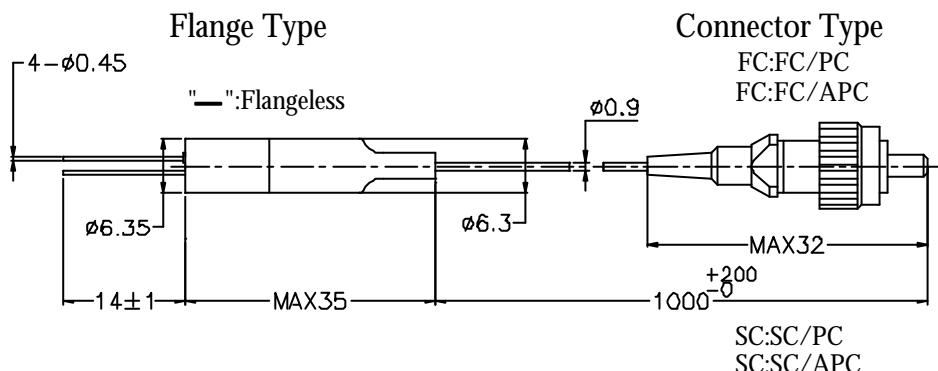
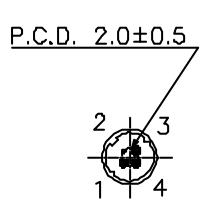
"I" = Isolator

Blank=PC Fiber  
APC=APC Fiber

Flange type (Blank;O;V;K)

RoHS Compliant  
Blank/G5/GR  
Blank = RoHS non-compliant product  
G5 = RoHS 5/6-compliant product (lead exemption)  
GR = Full RoHS compliant product (no exemption)

**Packaging Dimensions (Units in mm)**



## Warnings

**Handling Precautions:** This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

**Laser Safety:** Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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