

# **C-WDM DFB-LD TO-Can**

**FOL1xQxYxx4x**

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## 1. Absolute Maximum Ratings

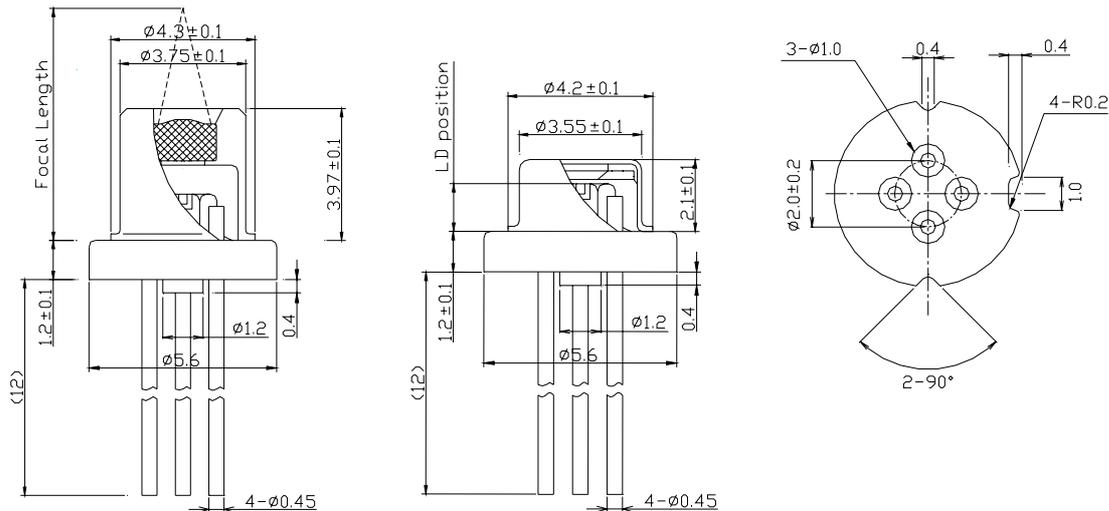
Parameter	Symbol	Min.	Max.	Unit	Note
Storage Temperature	Tstg	-40	85	°C	
Operating Case Temperature	Tc	-20	85	°C	S version
		0	70	°C	B version
LD Forward Current	IfLD	-	150	mA	
LD Reverse Voltage	VrLD	-	2	V	
PD Forward Current	IfPD	-	5	mA	
PD Reverse Voltage	VrPD	-	20	V	
Soldering Temperature (<10s)	Stemp	-	260	°C	
Relative Humidity	RH	0	85	%	

## 2. Performance Specifications (Tc=25°C, P<sub>0</sub>=5mW, unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	Ith	-	8	15	mA	CW
		-	-	50		CW, Tc=over temperature
LD Operating Current	Iop	-	-	50	mA	CW
		-	-	90		CW, Tc=over temperature
Slope Efficiency	η	0.15	0.25	-	W/A	CW
		0.10	-	-		CW, Tc=over temperature
LD Forward Voltage	Vf	-	-	1.6	V	CW
Peak Wavelength	λ <sub>p</sub>	λ <sub>p</sub> -3	λ <sub>p</sub> <sup>*1</sup>	λ <sub>p</sub> +3	nm	CW
Side Mode Suppression Ratio	SMSR	30	-	-	dB	CW, Tc=over temperature
Rise Time	tr	-	-	0.10	ns	I <sub>b</sub> =I <sub>th</sub> , 20-80%, Tc=over temperature
Fall Time	tf	-	-	0.15	ns	I <sub>b</sub> =I <sub>th</sub> , 80-20%, Tc=over temperature
Monitor PD Current	I <sub>m</sub>	50	-	1500	μA	VrPD=5V
Monitor PD Dark Current	I <sub>d</sub>	-	-	100	nA	VrPD=5V
Monitor PD Capacitance	C	-	-	10	pF	VrPD=5V, f=1MHz

Note: \*1 λ<sub>p</sub>: **14Q7**:1470nm, **14Q9**:1490nm, **15Q1**:1510nm, **15Q3**:1530nm, **15Q5**:1550nm, **15Q7**:1570nm, **15Q9**:1590nm, **16Q1**:1610nm Wavelength tolerance can be customized.

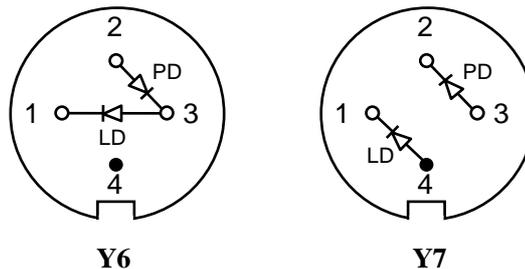
### 3. Dimensions



**Aspherical lens**  
 FOL1xQxYx A4 x  
 FL: 7.5±1.0mm

**Flat window**  
 FOL1xQxYx M4 x  
 LD: 1.26±0.1mm

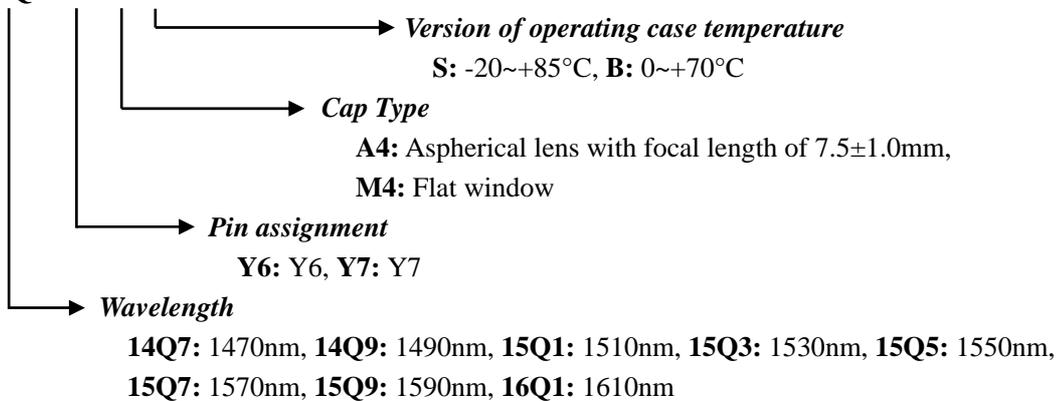
### 4. Pin Assignments



\* Bottom view : No.4 Pin is Case GND

### 5. Ordering Information

FOL 1xQx Yx x4 x



**6. Accompanied Data** ( $T_c=25^{\circ}\text{C}$ , unless otherwise specified)

Parameter	Symbol	Condition	Unit
Threshold Current	$I_{th}$	CW	mA
LD Operating Current	$I_{op}$	$P_0=5\text{mW}$ , CW	mA
Monitor PD Current	$I_m$	$P_0=5\text{mW}$ , CW	$\mu\text{A}$
Peak Wavelength	$\lambda_p$	$P_0=5\text{mW}$ , CW	nm

**7. Warning**

- (1) The laser light emitted from the optical fiber end is invisible and will be hazardous to the human eye. Avoid looking directly into the optical fiber, when the device is in operation.
- (2) The device should be damaged by static electricity and surge current. Static electricity protection and surge protection are needed before handling.

**8. Safety Information**

The product complies with 21 CFR1040.10 and 1040.11, Class 3b laser product. Invisible laser radiation is emitted from the end of the fiber or connector. Avoid direct exposure to the beam.

**9. Limited Warranty**

Furukawa Electric warrants the LD modules against defects in parts and workmanship for one full year after the delivery. This warranty shall be invalid by any abuse, misuse, misapplication or improper installation of the product.