PM79-F1C1R1-B1-Z0-KC Pre 1.0

795nm VCSEL TO 46 can with TEC

Features

: 795 nm wavelength range

: Single-mode polarization-stabilized VCSEL

: Internal TEC and thermistor

: Narrow Spectral Linewidth

: Other configurations available on request

Description

Applications

: Optical pumping of atomic clocks

: Rubidium Spectroscopy

: Optical Sensors

Absolute Maximum Ratings

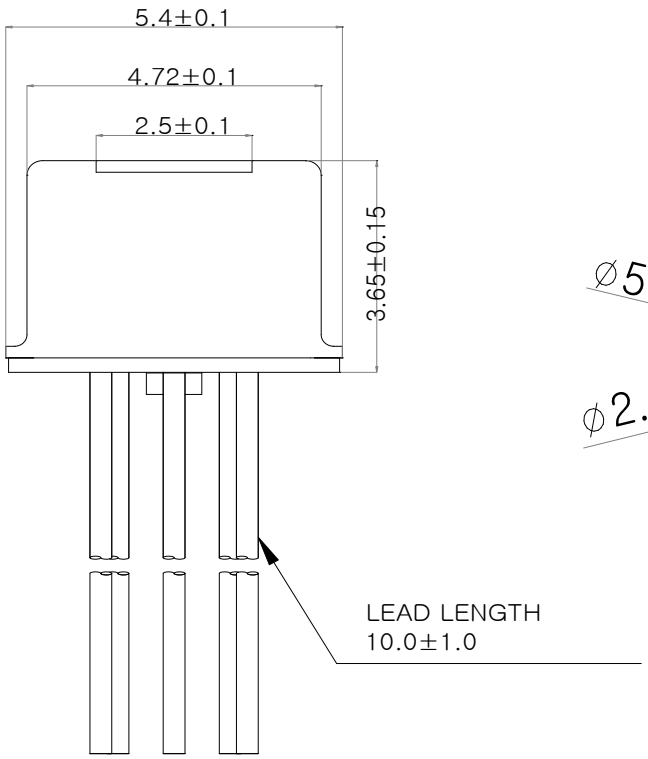
Parameter	Rating
Storage Temperature	-40 to 125 °C
Operating Temperature	0 to 100°C
Lead Solder Temperature	260 °C, 10 sec
VCSEL Forward Current	5.0 mA
VCSEL Reverse Voltage	5V (@10μA)
Maximum TEC current	0.8 A
Maximum TEC Voltage	0.6 V
Maximum TEC Heat Load	0.29 W
Maximum ΔT across the TEC	60°C

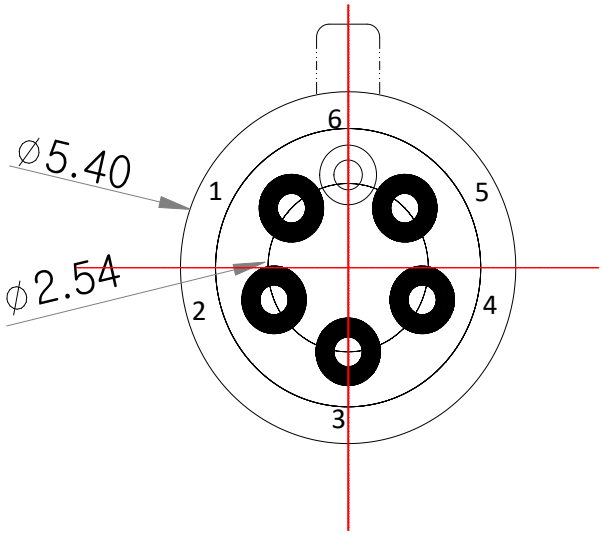
Part Number :	Description :
PM79-F1C1R1-B1-Z0-KC	795nm Flat window type TO-46 Package, Common Cathode Type

42 Ballyong-Ro, Deokjin-gu, Jeonju City, 54853 KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com

Dimensions

unit : mm





Bottom view

PIN OUT

PM79-F1C1R-B1-Z0-KC	
Number	Function
1	K_{VCSEL} & TRs
2	TEC(-)
3	A_{VCSEL}
4	TEC(+)
5	TRs
6	GND

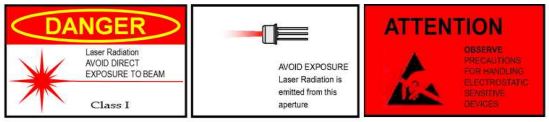
42 Ballyong-Ro, Deokjin-gu, Jeonju City, 54853 KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com

Electro-Optics Characteristics (T_a= 70 ± 5 ℃ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		3		mA	
Peak Wavelength	λ_P	794		795	nm	I_f= 4mA
λ Temperature Varation	Δ λ / Δ T		0.055		nm / °C	
Optical Output Power	P_o		0.4		mW	I_f= 4mA
Slope Efficiency	η		0.3		mW/mA	
Forward Voltage	V_F		1.8		V	I_f= 4mA
Operating Current	I_f		3.5	4.0	mA	
Side-mode Suppression Ratio	SMSR	25			dB	I_f= 3.5mA, Room Temp.
Beam Divergence	$\Theta_{1/e}{}^2$		13	16	°	I_f= 3.5mA, Room Temp.
Polariaztion Extinction Ratio	PER		15		dB	I_f= 3.5mA, Room Temp.
Accuracy of polariaztion Direction	δ_{pol}	-15		15	°	
Spectral Linewidth	Δ_λ		100		MHz	Room Temp.
Breakdown Voltage	V_B		-10		V	Room Temp.
TEC current		-0.5		0.5	A	
TEC Voltage		-0.4		0.4	V	
TEC Power Consumption				0.17	W	
Thermistor Resistance	R_{therm}		10		kΩ	Room Temp.
Beta value of Thermistor	β		3430		K	

Notes

* These specifications are subject to change without notice



NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product.
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.

42 Ballyong-Ro, Deokjin-gu, Jeonju City, 54853 KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com