YL-PSC650nM(90)-1mW Rev2.1

650nm RCLED Chip

Features

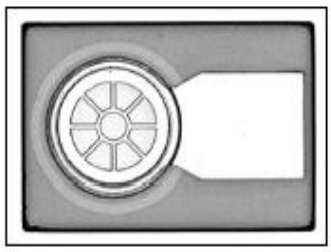
: 650 nm wavelength range

: No threshold

: Designed for POF data communications

: Other configurations available on request

Description



Applications

: Data Link Communication

: IEEE 1394.b

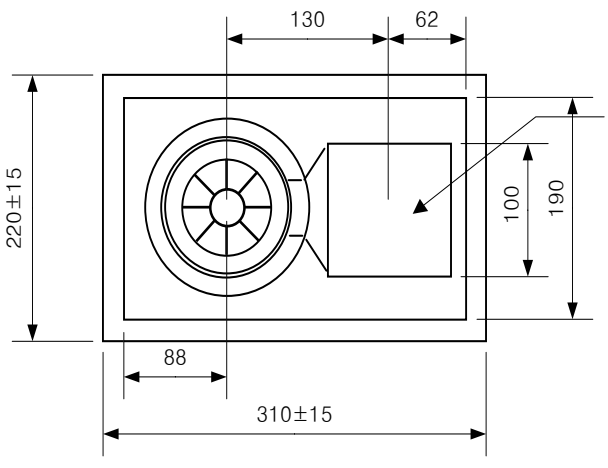
: Home Networking

: Sensors

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 ℃
Operating Temperature	-20 to 70 ℃
Continuous Forward Current	30mA
Continuous Reverse Voltage	5V (@10μA)

Dimensions



Anode Bonding Pad (100x100)

Unit : ㎛

Die Height : 200±15㎛

Electro-Optics Characteristics (T_a=25℃ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Total Radiant Flux	Φ_o		1	1.5	mW	I_f=20mA *
Radiant Intensity	P_o	0.2	0.3		mW/sr	I_f=20mA**
Peak Wavelength	λ_P	640	650	660	nm	I_f=20mA**
Spectral Width	Δλ		7		nm	T_a=0 to 70℃ at 20mA**
Beam Divergence	Θ		90		Deg.	I_f=20mA, FWHM
Forward Voltage	V f		2.0	2.2	V	I_f=20mA
Rise Time / Fall Time	t_R/t_F		3/3		ns	I_f=20mA, (10% - 90%)
Data Rate	T_{Data}		155		Mbps	I_f=20mA

Test Data were measured in TO header of wire bonded chip

* Measured in integrating sphere

** Measured in axial direction (0.01sr)

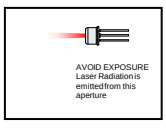
* ** Value is referenced to the vender's measurement system (correlation to customer product is required).

Thermal Characteristics

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
P_o Temp Coefficient	$\Delta P_o/\Delta T$		-0.6		%/ ℃	-20℃ ~ 70℃ at I_f=20mA
λ_P Temp Coefficient	$\Delta\lambda/\Delta T$		0.07		nm/℃	-20℃ ~ 70℃ at I_f=20mA

Notes

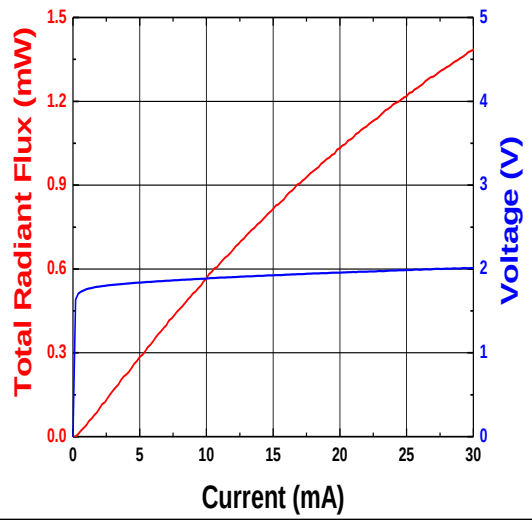
* These specifications are subject to change without notice.



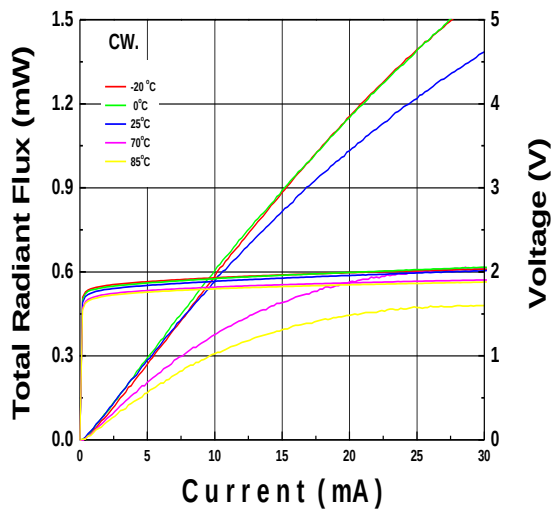
NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye 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.

Characteristics Curves

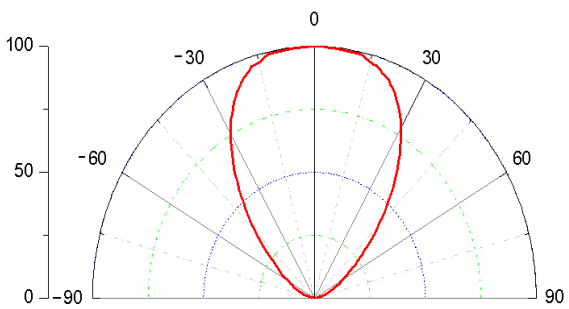
LIV Curve



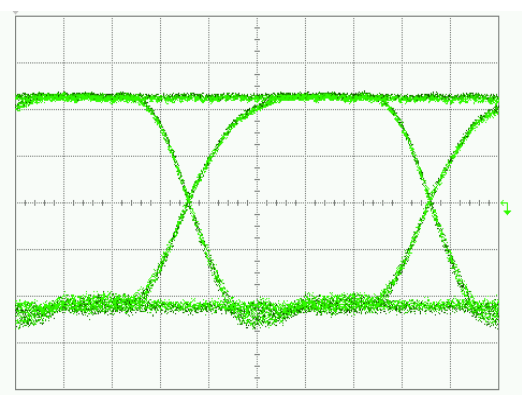
LIV vs Temperature



Angular Radiation



Eye Diagram



EL Spectrum