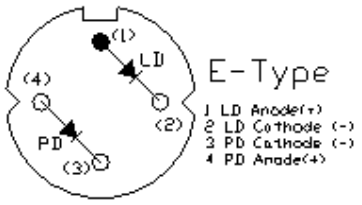
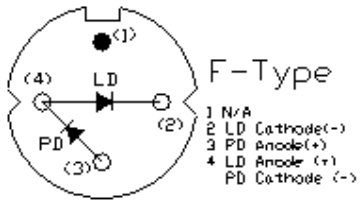
1310nm Laser Diode
LCU130582E/F

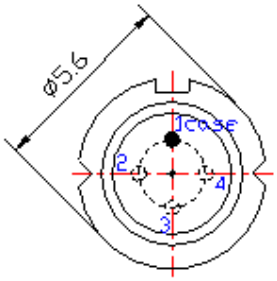
■Features
Un-cooled Laser diode with MQW structure
Wide operation temperature range
Dew point below -40°C
Both ball lens and flat window cap available

■External dimensions (Unit : mm)

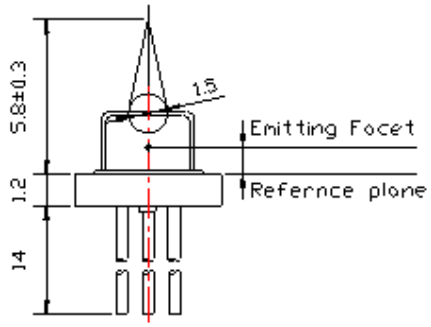




Bottom View



Top View



Side View

■Absolute Maximum Ratings(Tc=25℃)

Characteristic	Symbol	Rating	Unit
Optical Output Power	Po	5	mW
LD Reverse Voltage	Vr (LD)	2	V
PD Reverse Voltage	Vr (PD)	10	V
Operation Case Temperature	Top	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +125	°C

Ver.5 2011/01

Germany and other countries: LASER COMPONENTS GmbH, Phone: +49 8142 2864 0, Fax: +49 8142 2864 11, info@lasercomponents.com
USA: LASER COMPONENTS USA, Inc., Phone: +1 603 821 7040, Fax: +1 603 821 7041, info@laser-components.com
Great Britain: LASER COMPONENTS (UK) Ltd., Phone: +44 1245 491 499, Fax: +44 1245 491 801, info@lasercomponents.co.uk
France: LASER COMPONENTS S.A.S., Phone: +33 1 3959 5225, Fax: +33 1 3959 5350, info@lasercomponents.fr

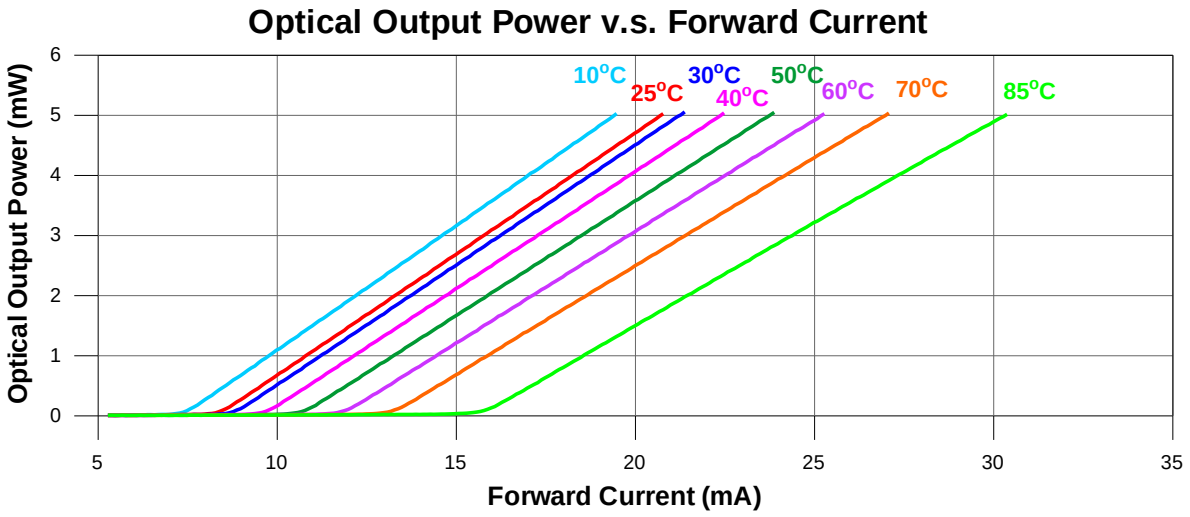
1310nm Laser Diode

■Electrical and Optical Characteristics(Tc=25℃)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshhold Current		Ith	Tc = 25°C	-	8	15	mA
Threshhold Current		Ith	Tc =-40 ~ +85°C	-	16	45	mA
Operating Current		Iop	Po=5mW	-	**21**	**28**	mA
Operating Current		Iop	Tc =-40 ~ +85°C	-	**31**	**60**	mA
Operation Voltage		Vop	Po = 5mW	-	1.2	1.5	V
Slope Efficiency		SE	Po = 1 to 4mW	0.25	0.4	-	mW/mA
Monitor Current (PD)		Im	Po = 5mW, V_{RPD}=2V	0.05	0.15	-	mA
Dark Current (PD)		Id	V_{RPD}=5V	-	-	0.1	μA
Capacitance (PD)		Ct	V_{RPD}=5V, f=1MHz	-	10	20	pF
Lasing Wavelength		λ	Po = 5mW	1290	1310	1330	nm
Spectral Width		Δλ	Po = 5mW	-	3	5	nm
Optical Output Power		Po	CW, Kink free	5	-	-	nm
P-I Kink		Ki	Po < 5mW	-	-	20	%
Rise and fall time		tr, tf	Po = 5mW, 10%~90%	-	-	0.7	ns
Tracking Error		TE	Po = 5mW, V_{RPD}=1V	-0.7	-	0.7	dB
Beam Divergence (FWHM)	Parallel	θ //	Po = 5mW	-	8	-	deg.
	Perpendicular	θ ⊥	Po = 5mW	-	10	-	deg.

◎θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

■Typical characteristic curves



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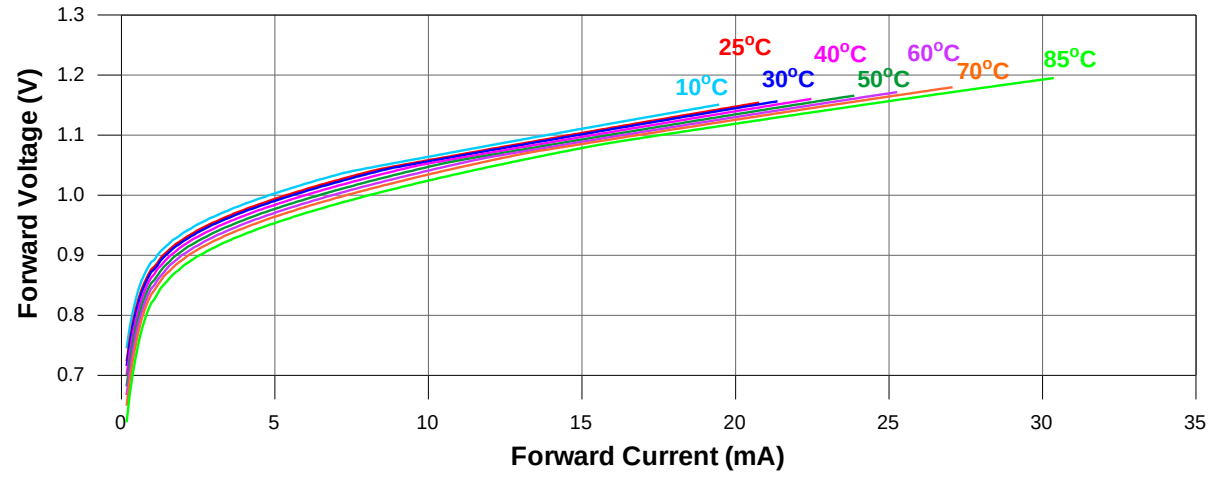
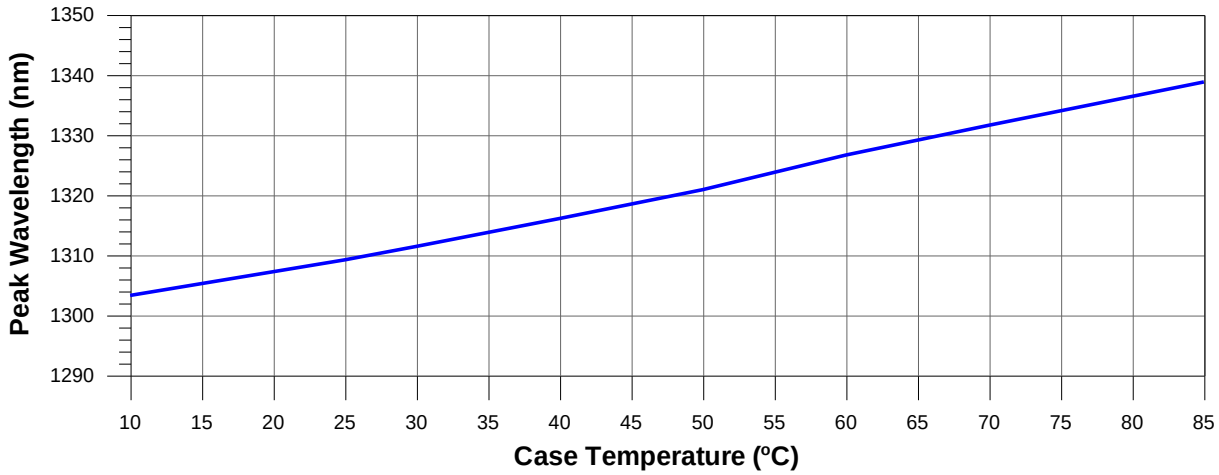
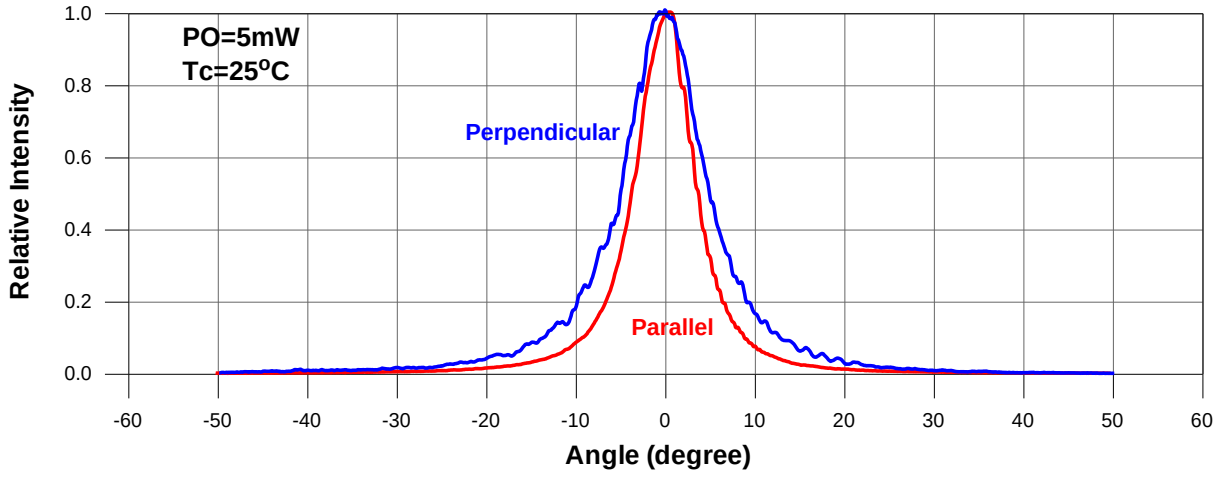
Forward Voltage v.s. Forwar Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern



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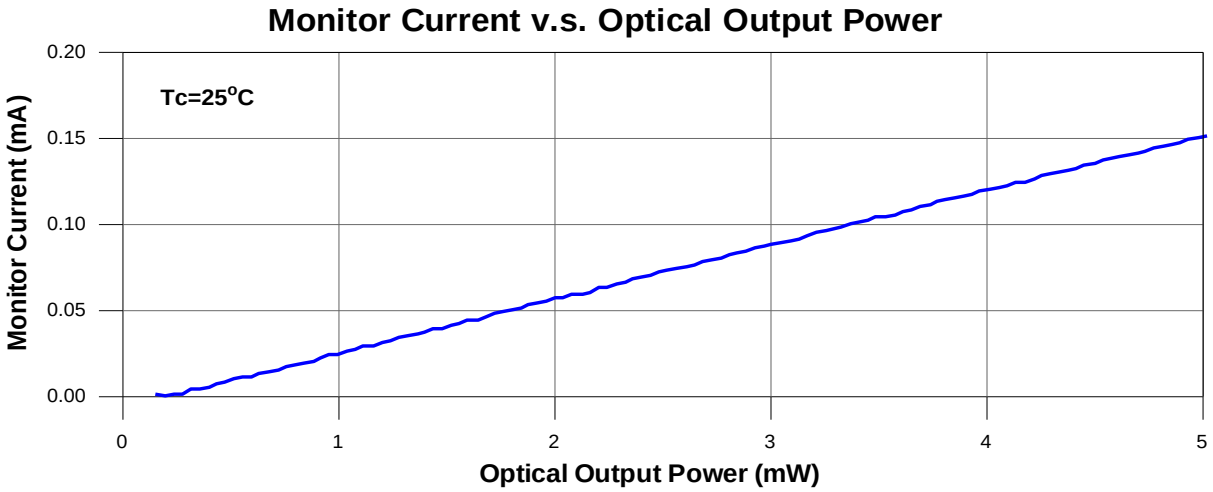

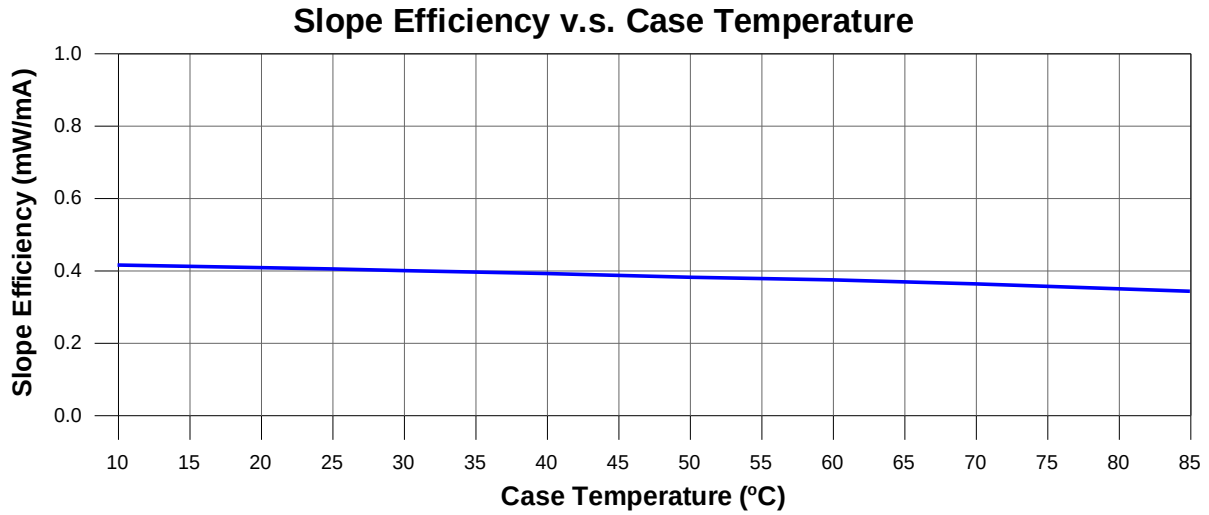

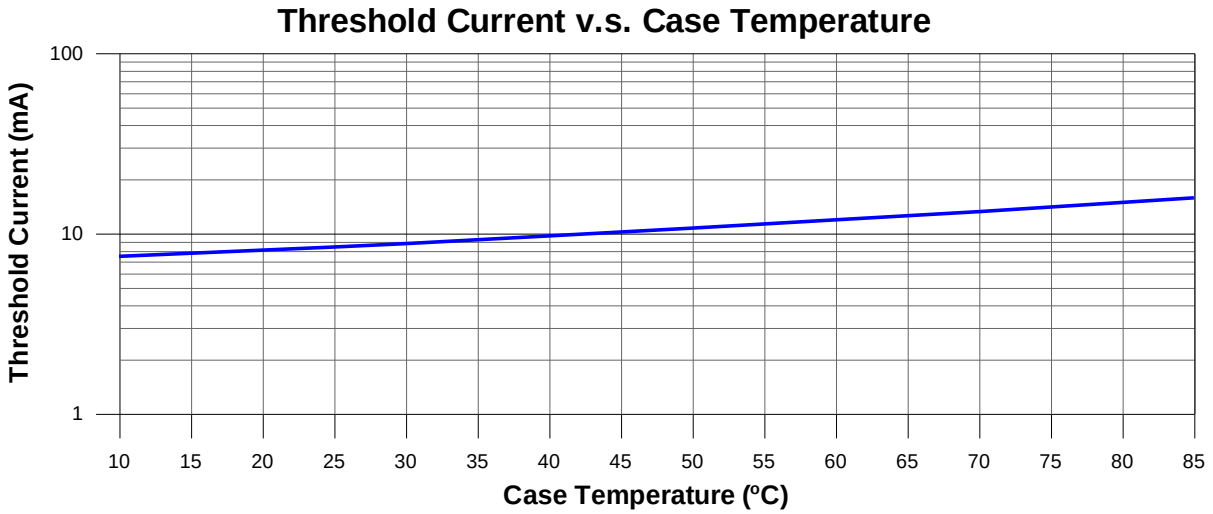

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