SONY

SLD1137VS

650nm Index-Guided Red Laser Diode

Description

The SLD1137VS is an index-guided red laser diode for BCS.

Operating current is 25mA lower than SLD1133VS.

Features

- Small astigmatism (7µm typ.)
- Low operating current (35mA typ.)
- Small package (ϕ5.6mm)
- Single longitudinal mode

Applications

Bar code scanner

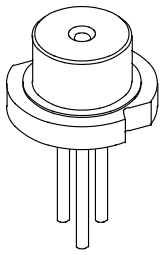
Structure

- AlGaInP MQW laser diode
- PIN photodiode to monitor laser beam output

Recommend Optical Power Output

5mW

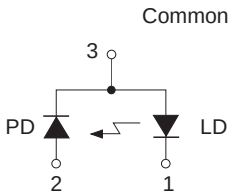
M-274



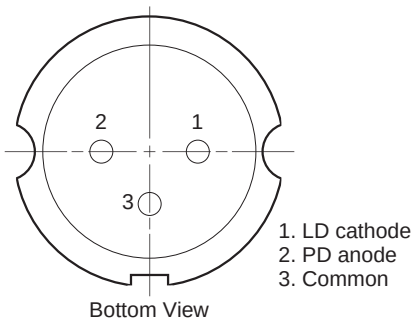
Absolute Maximum Ratings (Tc = 25°C)

• Optical power output	Po		7	mW
• Reverse voltage	V_R	LD	2	V
		PD	15	V
• Operating temperature	Topr		–10 to +60	°C
• Storage temperature	Tstg		–40 to +85	°C

Connection Diagram



Pin Configuration



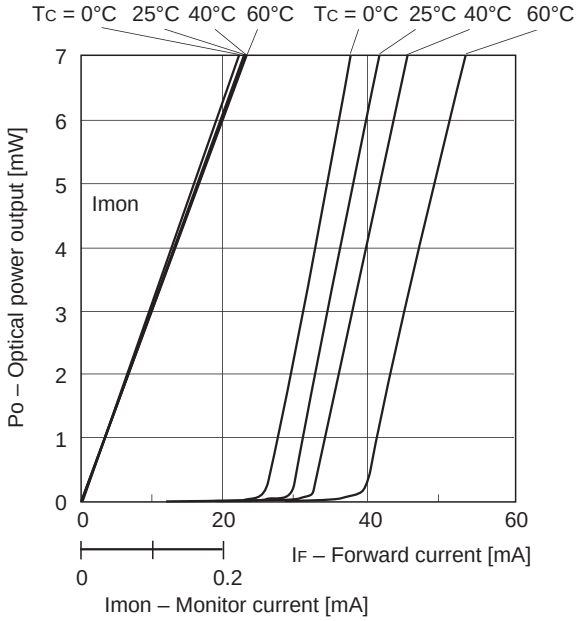
E99202-PS

Electrical and Optical Characteristics (Tc = 25°C) Tc: Case temperature

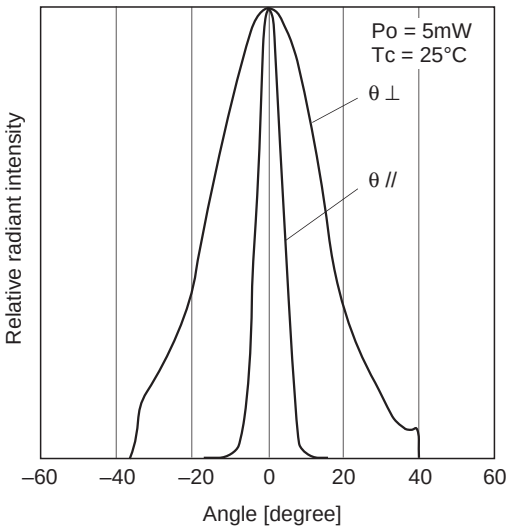
Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Threshold current		Ith			30	40	mA
Operating current		Iop	Po = 5mW		35	45	mA
Operating voltage		Vop	Po = 5mW		2.2	2.7	V
Wavelength		λp	Po = 5mW		650	655	nm
Radiation angle	Perpendicular	θ⊥	Po = 5mW	24	30	40	degree
	Parallel	θ//		6	8	12	degree
Positional accuracy	Position	ΔX, ΔY, ΔZ	Po = 5mW			±80	µm
	Angle	Δϕ//				±3	degree
		Δϕ⊥				±3	degree
Differential efficiency		ηD	Po = 5mW	0.3	0.5	0.8	mW/mA
Astigmatism		As	Po = 5mW		7	15	µm
Monitor current		Imon	Po = 5mW, V_R = 5V	0.05	0.1	0.5	mA

Example of Representative Characteristics

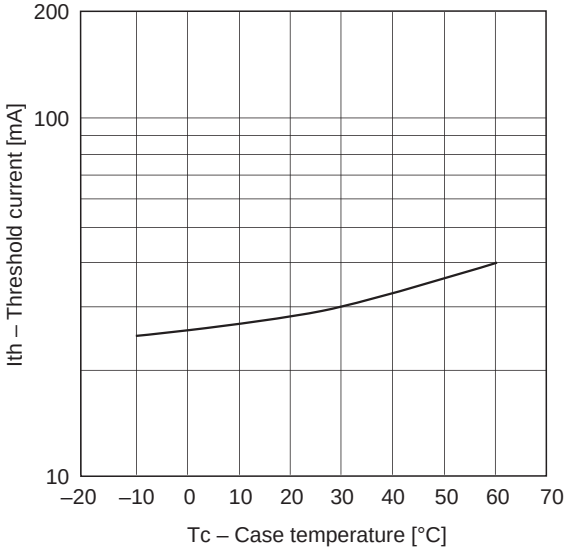
Optical power output vs. Forward current characteristics
Optical power output vs. Monitor current characteristics



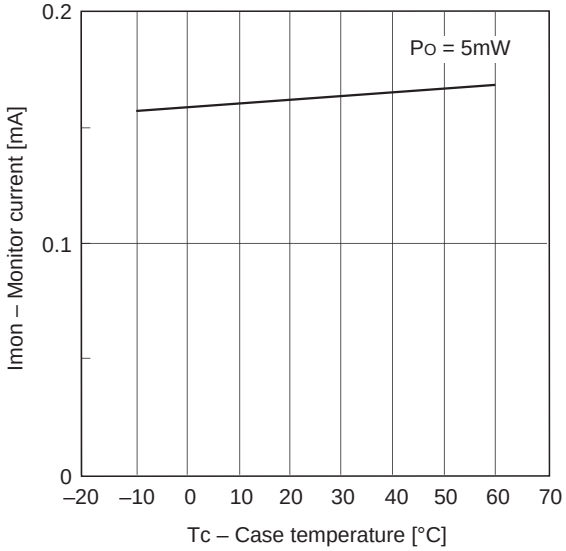
Far field pattern (FFP)



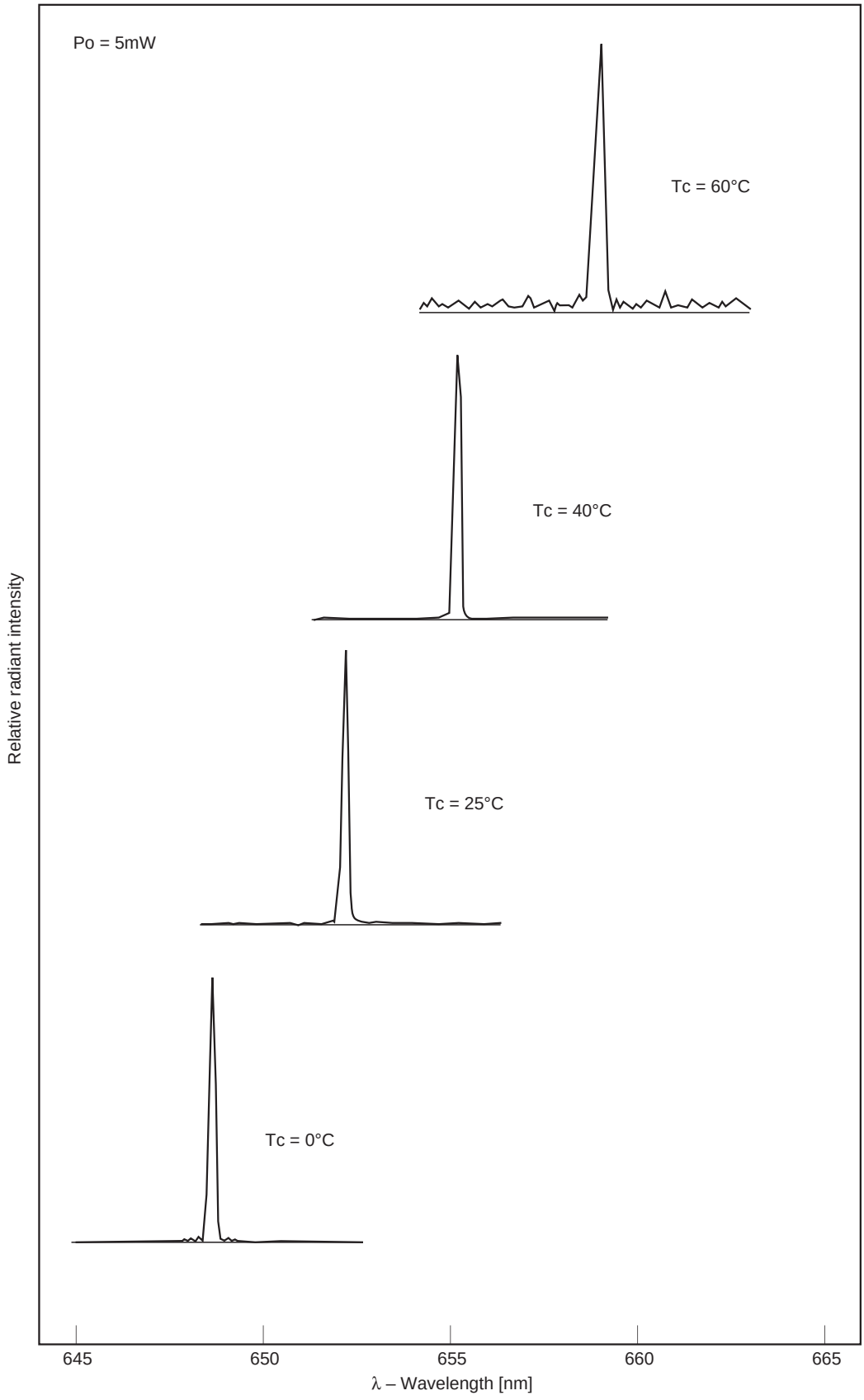
Threshold current vs. Temperature characteristics



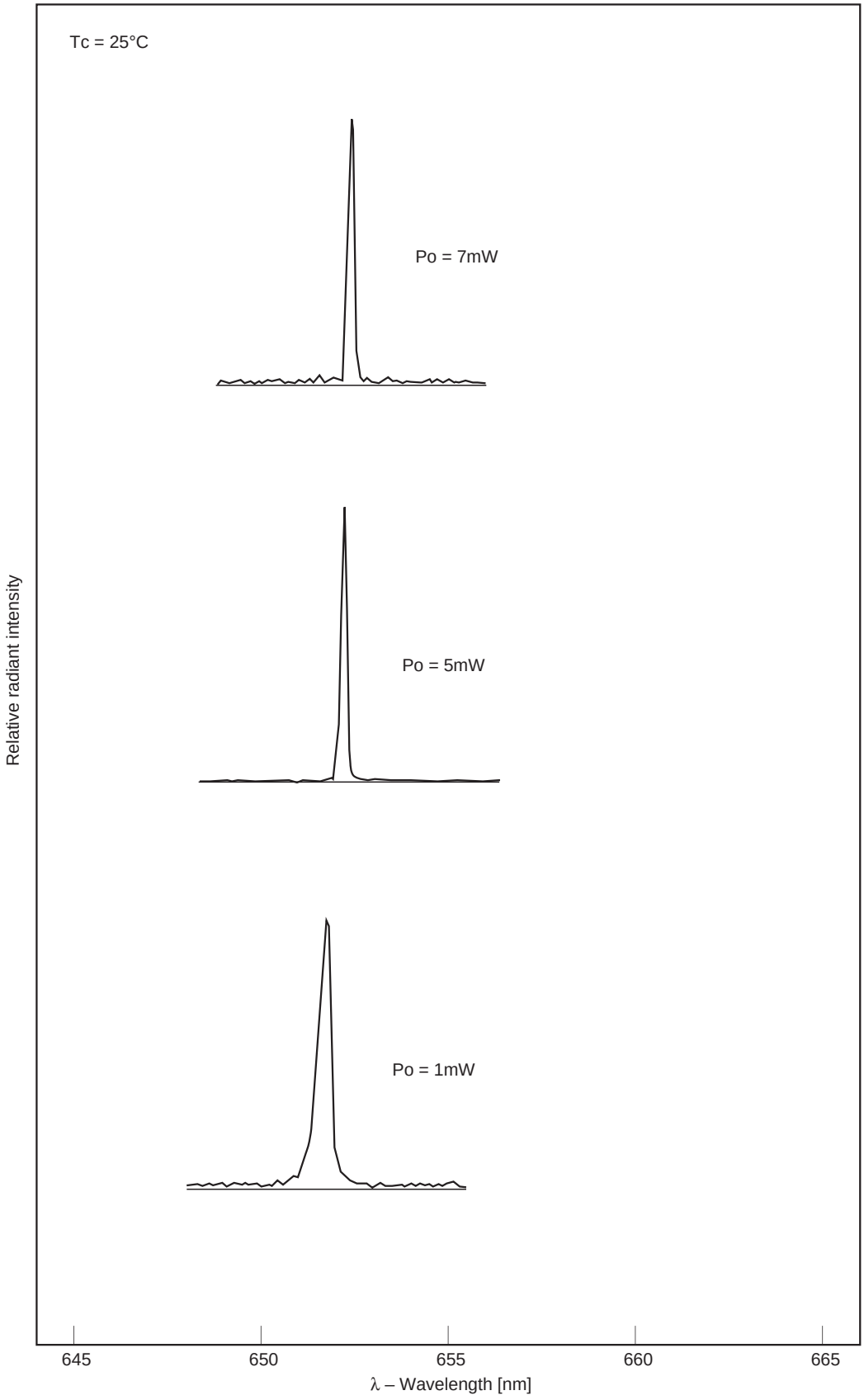
Monitor current vs. Temperature characteristics



Temperature dependence of spectrum



Power output dependence of spectrum



Package Outline Unit: mm

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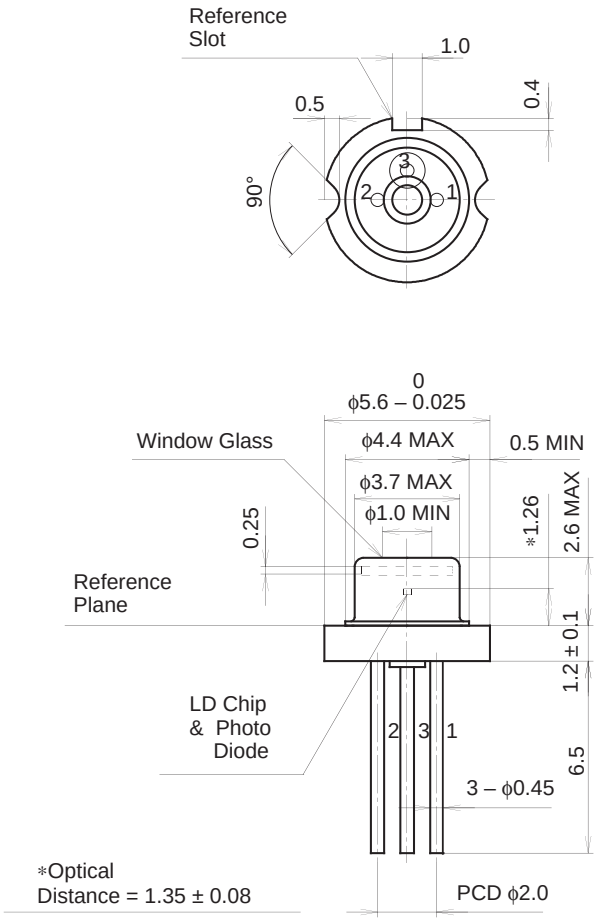

SONY CODE	M-274
EIAJ CODE	————
JEDEC CODE	————

PACKAGE WEIGHT	0.3g