

DL-3147-141(-241)

Index Guided AlGaInP Laser Diode

Overview

DL-3147-141(-241) is index guided 645 nm (Typ.) AlGaInP laser diode with low threshold current and high operating temperature. The low threshold current and high operating temperature are achieved by a strained multiple quantum well active layer. DL-3147-141(-241) is suitable for applications such as bar-code scanners, optical disc systems and other optical information systems.

Features

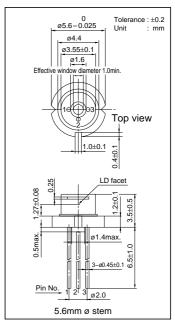
Short wavelength : 645 nm (Typ.)
Low threshold current : Ith = 45 mA (Typ.)
High operating temperature : 5 mW at 60°C

• TE mode

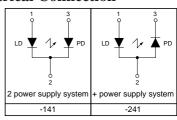
Absolute Maximum Ratings at Tc=25°C

Parameter		Symbol	Ratings	Unit	
Light Output		Po	7	mW	
Reverse Voltage	Laser PIN	VR	30	V	
Operating Temperature		Topr	-10 to +60	°C	
Storage Temperature		Tstg	-40 to +85	°C	

Package Dimensions



Electrical Connection



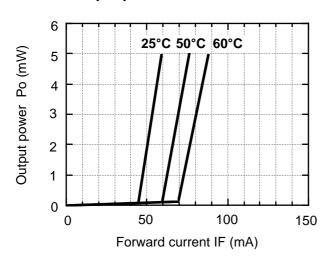
Electrical and Optical Characteristics at Tc=25°C

Para	meter	Symbol	Condition	Min.	Тур.	Max.	Unit
Threshol	d Current	Ith	CW	-	45	65	mA
Operatin	g Current	Iop	Po=5mW	-	60	80	mA
Operatin	g Voltage	Vop	Po=5mW	-	2.2	2.5	V
Lasing W	avelength	λp	Po=5mW	-	645	655	nm
Beam *)	Perpendicular	$\theta \perp$	Po=5mW	25	30	40	deg.
Divergence	Parallel	θ //	Po=5mW	6	7.5	10	deg.
Off Axis	Perpendicular	$\Delta heta \perp$	-	-	-	±3	deg.
Angle	Parallel	$\Delta heta$ //	-	-	_	±2	deg.
Differentia	l Efficiency	dPo/dIop	_	0.15	0.35	-	mW/mA
Monitoring C	Output Current	Im	Po=5mW	0.05	0.15	-	mA
Astigr	natism	As	Po=5mW	_	8	_	mm

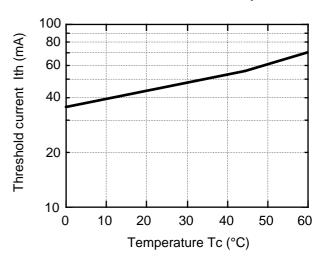
^{*)} Full angle at half maximum note: The above product specifications are subject to change without notice.

Characteristics

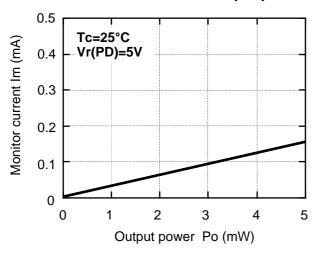
Output power vs. Forward current



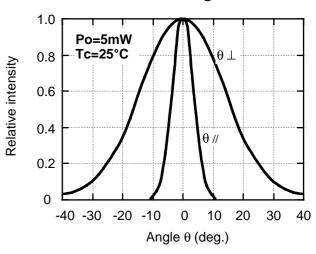
Threshold current vs. Temperature



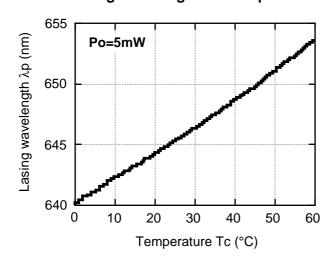
Monitor current vs. Output power



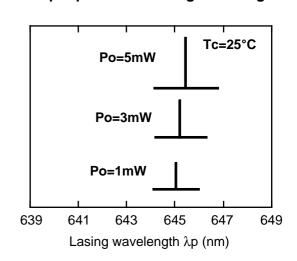
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



Relative intensity



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Precautionary instructions in handling gallium arsenic products

Special precautions must be taken in handling this product because it contains, gallium arsenic, which is designated as a toxic substance by law. Be sure to adhere strictly to all applicable laws and regulations enacted for this substance, particularly when it comes to disposal.

Manufactured by; Tottori SANYO Electric Co., Ltd.

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