

AlGaInP | APC Visible Laser Diode

ADL-63203TA4

6-2D-LD63-109 Rev.01

635nm 20mW LD

By converting the external APC circuit board into an ASIC, we package the APC circuit into a traditional TO-can together with the laser chip. From now on, single package APC function included laser diode is realized. Powered with Arima's proprietary APC **LASER DIODE™** technology, **ADL-63203TA4** is your perfect solution for the stable light power output, compact size, high brightness laser light source.

APC LASER DIODE™ v.4



Features

1. 635nm 20mW 40°C high reliable operation
2. Saving space and cost of laser module
3. Voltage driven LD, easy to use
4. Highly stable laser output power
5. Strong reverse bias protection
6. Reliable high temperature operation
7. High ESD sustainability voltage, ~10KV
8. Broad bandwidth from blue to infrared
9. High power operation vs. supply current up to 300mA
10. Stable output power vs. supply voltage from 2.5V to 6.0V.
11. Light-fuse: automatic shutdown when output power over the limit

Applications

1. High precision measuring instruments
2. High precision industrial makers
3. Survey and engineering instruments

Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Power supply voltage	V_{cc}	2.5~6.0	V
Laser optical output power	P_o	22.0	mW
Operation temperature	T_{opr}	-10 ~ +40	°C
Storage temperature	T_{stg}	-40 ~ +85	°C

Electrical and optical characteristics ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	630	639	645	nm	$P_o=20\text{mW}$
Operation current	I_{op}	-	75	120	mA	$P_o=20\text{mW}$
Variable resistor	VR	6.5	10	20	K Ω	$V_{cc}=3\text{V}$
Parallel divergence angle	$\theta_{ }$	5	8	12	Deg	$P_o=20\text{mW}$
Perpendicular divergence angle	$\theta_{\perp}$	25	33	40	Deg	
Parallel FFP deviation angle	$\Delta\theta_{ }$	-3.0	0	+3.0	Deg	
Perpendicular FFP deviation angle	$\Delta\theta_{\perp}$	-3.0	0	+3.0	Deg	
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+80	μm	-
Power-Temp stability (25~40°C)	ΔP_{oT}	-20	-10	0	%	$P_o=20\text{mW}, V_{cc}=3.0\text{V}$
Power-Vcc stability (6.0~3.0V)	ΔP_{oV}	-15	-10	0	%	$P_o=20\text{mW}, \text{Temp}=25^\circ\text{C}$
Power-Vcc stability (3.0~2.5V)	ΔP_{oV}	-15	-10	0	%	$P_o=20\text{mW}, \text{Temp}=25^\circ\text{C}$

* Effective heat sink is recommended on 6V case due to extra heat

For reference only. Contents above are subject to change without notice.

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