

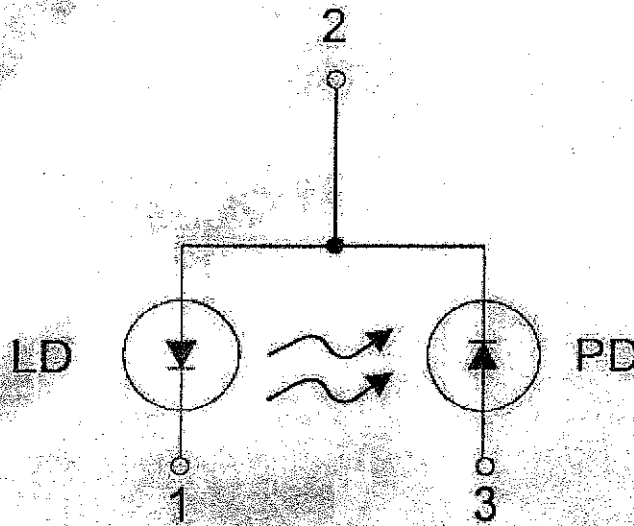
### Features

Liton's LTL505T low-cost AlGaInP laser diode emits highly visible 650 nm output light with low threshold current and high output efficiency. A diffraction-limited single spatial mode beam output allows easy collimation with readily available optics. The active layer is MOCVD grown strained quantum well epitaxial structure. The high output efficiency is achieved by optimized device structure design. Both laser facets are coated with multilayer dielectric to assure high performance and reliability. APIN photo-diode is included with each laser for output power monitoring. Liton's LTL505T is ideal for pointing, alignment, and bar code scanning applications.

### Electro-optical Characteristic (Tc=25 °C)

ITEMS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Optical Output Power	P <sub>o</sub>	Kirk Free	5	-	-	mW
Threshold Current	I <sub>th</sub>		-	35	60	mA
Operation Current	I <sub>op</sub>	P <sub>o</sub> =5 mW	-	45	70	mA
Operation Voltage	V <sub>op</sub>	P <sub>o</sub> =5 mW	-	2.4	2.6	V
Lasing Wavelength	λ <sub>op</sub>	P <sub>o</sub> =5 mW	645	650	655	nm
Slope Efficiency	η	3mW ~ 5mW	0.1	0.4	-	mW/mA
Beam Divergence	θ <sub>L</sub>	P <sub>o</sub> =5 mW,FWHM	-	35	-	deg.
	θ <sub>  </sub>	P <sub>o</sub> =5 mW,FWHM	-	8	-	deg.
Monitor Current	I <sub>m</sub>	P <sub>o</sub> =5 mW	0.1	0.55	0.85	mA

**Pin Connection:**



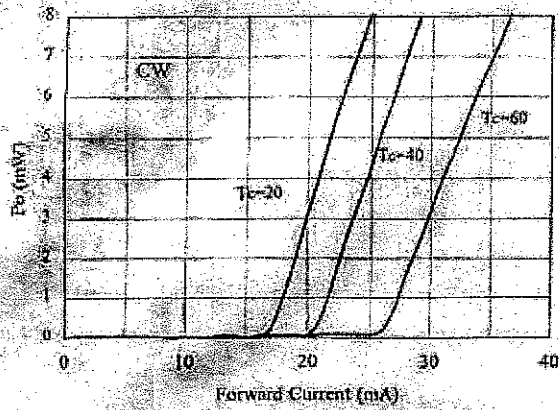
- 1. Laser diode cathode
- 2. Laser diode anode and photodiode cathode
- 3. Photodiode anode

**Absolute Maximum Ratings (Tc=25 °C)**

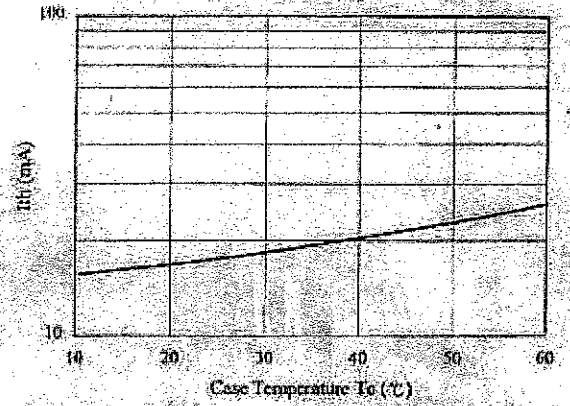
ITEMS	SYMBOL	RATINGS	UNIT
Optical Output Power	P <sub>o</sub>	6	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operation Case Temperature	T <sub>c</sub>	-10 ~ +50	°C

VISIBLE LASER DIODES

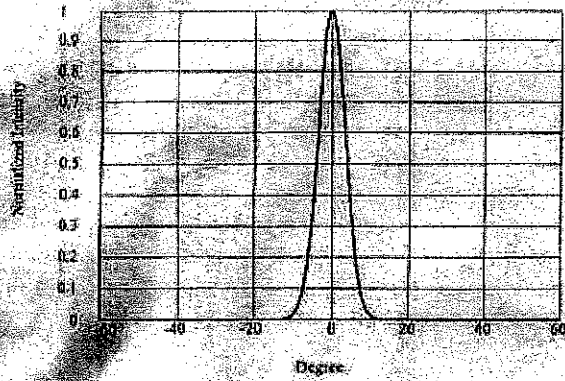
Optical Output Power (Po) vs. Forward Current



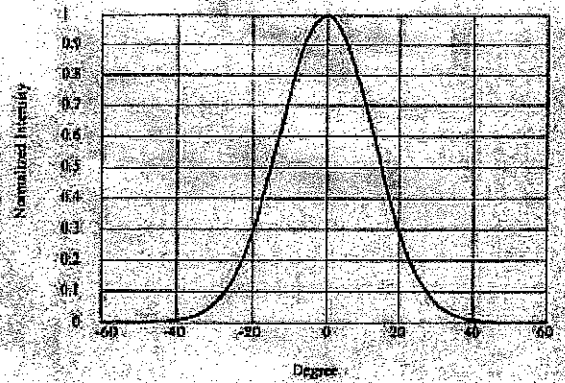
Threshold Current vs. Temperature



Parallel Far Field Pattern



Perpendicular Far Field Pattern



Package Outline:

Units in: mm

