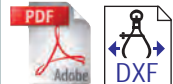


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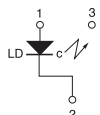
## $\lambda = 658 \text{ nm}$ , $P = 50 \text{ mW}$ , Single Mode Sanyo DL7147-201

CAUTION: ELECTROSTATIC SENSITIVE



### Pin Description

- 1 laser anode
- 2 laser cathode
- 3 no connection



OPEN PIN CODE (Compatible with Styles B & C)

- $\varnothing 5.6 \text{ mm}$  Package
- $1 \mu\text{m}$  Astigmatism @  $50 \text{ mW}$
- Pulsed Optical Power:  $P_o = 100 \text{ mW}$  with a 50% or less Duty Cycle and a Max Pulse width of  $0.1 \mu\text{s}$

ITEM#	£* 1-5 PCS	€* 1-5 PCS	RMB* 1-5 PCS
DL7147-201	£ 32.37	€ 41.75	¥ 395.84

\*For quantities over 5 pieces, please call our local office for pricing.

ITEM#	PRICE 1-5 PCS	PRICE 6-10 PCS	PRICE 11-20 PCS	DESCRIPTION
DL7147-201	\$ 46.90	\$ 42.21	\$ 30.49	Sanyo 658 nm, 50 mW

### Absolute Maximum Ratings ( $T_c = 25 \text{ }^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING
Optical Output Power (CW)	$P_o$	60 mW
Optical Output Power (Pulse)	$P_o$	100 mW*
LD Reverse Voltage	$V_{R(LD)}$	2 V
Operation Case Temperature	$T_c$	-10 to $75 \text{ }^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to $85 \text{ }^\circ\text{C}$

\*Note: Pulse width  $\leq 0.1 \mu\text{s}$ , duty = 50%

### Characteristics ( $T_c = 25 \text{ }^\circ\text{C}$ , $P = 50 \text{ mW}$ )

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX
Threshold Current	$I_{th}$	—	40 mA	50 mA
Operation Current	$I_{op}$	—	90 mA	120 mA
Operation Voltage	$V_{op}$	—	2.5 V	3.0 V
Lasing Wavelength	$\lambda_p$	—	658 nm	662 nm
Beam Divergence (FWHM)	$\theta_{//}$	7.5°	9°	11°
	$\theta_{\perp}$	15°	16°	20°

Note: All data is presented as typical unless otherwise specified.

## $\lambda = 658 \text{ nm}$ , $P = 80 \text{ mW}$ , Single Mode Mitsubishi ML120G21

CAUTION: ELECTROSTATIC SENSITIVE



### Pin Description

- 1 laser anode
- 2 laser cathode
- 3 no connection



PIN CODE 9E

- $\varnothing 5.6 \text{ mm}$  Package
- 1.8 (Typ.) Aspect Ratio
- $1 \mu\text{m}$  (Typ.) Astigmatic Distance
- 0.95 W/A (Typ.) Efficiency

ITEM#	£* 1-5 PCS	€* 1-5 PCS	RMB* 1-5 PCS
ML120G21	£ 48.65	€ 62.75	¥ 595.02

\*For quantities over 5 pieces, please call a local office for pricing.

ITEM#	PRICE 1-5 PCS	PRICE 6-10 PCS	PRICE 11-20 PCS	DESCRIPTION
ML120G21**	\$ 70.50	\$ 66.98	\$ 59.93	Mitsubishi 658 nm, 80 mW

\*\*Not Compatible with TCLDM9

### Absolute Maximum Ratings ( $T_c = 25 \text{ }^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING
Optical Output Power (CW)	$P_o$	80 mW
Optical Output Power (Pulse)	$P_o$	160 mW*
Reverse Voltage	$V_{RL}$	2 V
Operation Case Temperature	$T_c$	-10 to $75 \text{ }^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to $100 \text{ }^\circ\text{C}$

\*Note: Pulse width  $\leq 50 \text{ ns}$ , duty = 50%

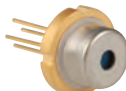
### Characteristics ( $T_c = 25 \text{ }^\circ\text{C}$ , $P = 80 \text{ mW}$ )

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX
Threshold Current	$I_{th}$	—	65 mA	—
Operation Current	$I_{op}$	—	150 mA	—
Operation Voltage	$V_{op}$	—	2.4V	3.0 V
Slope Efficiency	$\eta_s$	—	0.95 mW/mA	—
Peak Wavelength	$\lambda_p$	654 nm	658 nm	662 nm
Beam Divergence (FWHM)	$\theta_{//}$	7°	9.5°	12°
	$\theta_{\perp}$	14°	17°	20°

Note: All data is presented as typical unless otherwise specified.

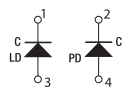
## $\lambda = 660 \text{ nm}$ , $P = 90 \text{ mW}$ , Single Mode Hitachi HL6548FG

CAUTION: ELECTROSTATIC SENSITIVE



### Pin Description

- 1 laser cathode
- 2 monitor diode cathode/case
- 3 laser anode
- 4 monitor diode anode



PIN CODE 9F

- $\varnothing 9 \text{ mm}$  Package
- AlGaInP Structure
- Single Longitudinal Mode

ITEM#	£* 1-5 PCS	€* 1-5 PCS	RMB* 1-5 PCS
HL6548FG*	£ 137.31	€ 177.11	¥ 1,679.60

\*For quantities over 5 pieces, please call a local office for pricing.

ITEM#	PRICE 1-5 PCS	PRICE 6-10 PCS	PRICE 11-20 PCS	DESCRIPTION
HL6548FG**	\$ 199.00	\$ 189.05	\$ 175.12	Hitachi 660 nm, 90 mW

\*\*Not Compatible with TCLDM9

### Absolute Maximum Ratings ( $T_c = 25 \text{ }^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING
Optical Output Power (CW)	$P_o$	100 mW
LD Reverse Voltage	$V_{R(LD)}$	2 V
PD Reverse Voltage	$V_{R(PD)}$	30 V
Operation Case Temperature	$T_{stg}$	-10 to $60 \text{ }^\circ\text{C}$
Storage Temperature	$T_c$	-40 to $85 \text{ }^\circ\text{C}$

### Characteristics ( $T_c = 25 \text{ }^\circ\text{C}$ , $P = 90 \text{ mW}$ )

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX
Threshold Current	$I_{th}$	—	55 mA	70 mA
Operation Current	$I_{op}$	—	140 mA	180 mA
Operation Voltage	$V_{op}$	—	2.4 V	2.8 V
Lasing Wavelength	$\lambda$	654 nm	660 nm	665 nm
Beam Divergence (FWHM)	$\theta_{//}$	7°	10°	13°
	$\theta_{\perp}$	15°	17°	20°
Monitor Current	$I_m$	—	0.6 mA	—

Note: All data is presented as typical unless otherwise specified.