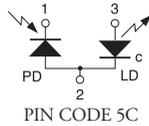


$\lambda = 658 \text{ nm}$, $P = 35 \text{ mW}$, Single Mode Hitachi HL6501MG**Pin Description**

- 1 monitor diode cathode
- 2 common case
- 3 laser anode



- $\varnothing 5.6 \text{ mm}$ Package
- AlGaInP Structure
- $1 \times 5 \mu\text{m}$ Emitter Size
- Single Longitudinal Mode
- Pulsed Optical Power of 50 mW with $a \leq 50\%$ Duty Cycle, Maximum Pulse Width of 100 ns

| ITEM# | £* 1-5 PCS | €* 1-5 PCS | RMB* 1-5 PCS |
|----------|---------------|---------------|-----------------|
| HL6501MG | £ 27.26 | € 35,16 | ¥ 333.38 |

*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 |
|----------|------------------|-------------------|--------------------|-----------------------|
| HL6501MG | \$ 39.50 | \$ 33.58 | \$ 25.68 | Hitachi 658 nm, 35 mW |

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

| CHARACTERISTIC | SYMBOL | RATING |
|----------------------------|-------------|----------------------------|
| Optical Output Power (CW) | P_o | 35 mW |
| LD Reverse Voltage | $V_{R(LD)}$ | 2 V |
| PD Reverse Voltage | $V_{R(PD)}$ | 30 V |
| Operation Case Temperature | T_c | -10 to 60 $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -40 to 85 $^\circ\text{C}$ |

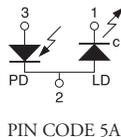
Characteristics ($T_c = 25 \text{ }^\circ\text{C}$, $P = 30 \text{ mW}$)

| CHARACTERISTIC | SYMBOL | MIN | TYP. | MAX |
|-------------------|------------------|-------------|--------------|---------------|
| Threshold Current | I_{th} | 30 mA | 45 mA | 70 mA |
| Operation Current | I_{op} | - | 65 mA | 95 mA |
| Operation Voltage | V_{op} | 2.1 | 2.6 V | 3.0 V |
| Lasing Wavelength | λ_p | 645 nm | 658 nm | 665 nm |
| Beam Divergence | $\theta//$ | 7 $^\circ$ | 8.5 $^\circ$ | 10.5 $^\circ$ |
| (FWHM) | θ_{\perp} | 18 $^\circ$ | 22 $^\circ$ | 26 $^\circ$ |
| Monitor Current | I_m | 0.05 mA | 0.2 mA | 1.5 mA |

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

 $\lambda = 658 \text{ nm}$, $P = 45 \text{ mW}$, Single Mode Sanyo DL6147-040**Pin Description**

- 1 laser cathode
- 2 common case
- 3 monitor diode anode



- $\varnothing 5.6 \text{ mm}$ Package
- 30 mA (Typ.) Threshold Current
- Single Longitudinal Mode

| ITEM# | £* 1-5 PCS | €* 1-5 PCS | RMB* 1-5 PCS |
|------------|---------------|---------------|-----------------|
| DL6147-040 | £ 24.64 | € 31,78 | ¥ 301.31 |

*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 |
|------------|------------------|-------------------|--------------------|---------------------|
| DL6147-040 | \$ 35.70 | \$ 32.13 | \$ 24.99 | Sanyo 658 nm, 45 mW |

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

| CHARACTERISTIC | SYMBOL | RATING |
|----------------------------|-------------|----------------------------|
| Optical Output Power (CW) | P_o | 45 mW |
| LD Reverse Voltage | $V_{R(LD)}$ | 2 V |
| Operation Case Temperature | T_c | -10 to 60 $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -40 to 85 $^\circ\text{C}$ |

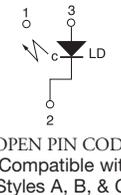
Characteristics ($T_c = 25 \text{ }^\circ\text{C}$, $P = 40 \text{ mW}$)

| CHARACTERISTIC | SYMBOL | MIN | TYP. | MAX |
|-------------------|------------------|-------------|-------------|-------------|
| Threshold Current | I_{th} | - | 30 mA | 50 mA |
| Operation Current | I_{op} | - | 65 mA | 85 mA |
| Operation Voltage | V_{op} | - | 2.4 V | 2.8 V |
| Lasing Wavelength | λ_p | 650 nm | 658 nm | 665 nm |
| Beam Divergence | $\theta//$ | 7 $^\circ$ | 10 $^\circ$ | 13 $^\circ$ |
| (FWHM) | θ_{\perp} | 12 $^\circ$ | 16 $^\circ$ | 20 $^\circ$ |
| Monitor Current | I_m | 0.3 mA | 0.5 mA | 0.7 mA |

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

 $\lambda = 658 \text{ nm}$, $P = 50 \text{ mW}$, Single Mode Hitachi HL6512MG**Pin Description**

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



- $\varnothing 5.6 \text{ mm}$ Package
- AlGaInP Structure
- Single Longitudinal Mode
- 70 mW Output Power with 100 ns Pulse Width, 50% Duty Cycle

| ITEM# | £* 1-5 PCS | €* 1-5 PCS | RMB* 1-5 PCS |
|----------|---------------|---------------|-----------------|
| HL6512MG | £ 34.02 | € 43,88 | ¥ 416.10 |

*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 |
|----------|------------------|-------------------|--------------------|-----------------------|
| HL6512MG | \$ 49.30 | \$ 46.84 | \$ 43.39 | Hitachi 658 nm, 50 mW |

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

| CHARACTERISTIC | SYMBOL | RATING |
|------------------------------|-------------|-------------------------------|
| Optical Output Power (CW) | P_o | 50 mW |
| Optical Output Power (Pulse) | P_o | 70 mW* |
| LD Reverse Voltage | $V_{R(LD)}$ | 2 V |
| Operation Case Temperature | T_c | -10 to 70 $^\circ\text{C}$ ** |
| Storage Temperature | T_{stg} | -40 to 85 $^\circ\text{C}$ * |

*Pulse Width = 100 ns, Duty Cycle = 50%.

**Note: The value of -10 to +70 $^\circ\text{C}$ is effective under pulse operation.

The value under CW operation is -10 to +60 $^\circ\text{C}$.

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

| CHARACTERISTIC | SYMBOL | MIN | TYP. | MAX |
|-------------------|------------------|-------------|-----------------|-------------|
| Threshold Current | I_{th} | 30 mA | 45 mA | 60 mA |
| Operation Current | I_{op} | - | 115 mA | 135 mA |
| Operation Voltage | V_{op} | 2.1 | 2.6 V | 3.0 V |
| Beam Divergence | $\theta//$ | 7 $^\circ$ | 8.5 $^\circ$ | 11 $^\circ$ |
| (FWHM) | θ_{\perp} | 18 $^\circ$ | 21 $^\circ$ | 26 $^\circ$ |
| Lasing Wavelength | λ_p | 650 nm | 658 nm | 662 nm |
| Astigmatism | A_s | - | 5 μm | - |

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