



LED Display

Product Data Sheet

LTL-2300HR

Spec No.: DS-30-98-389

Effective Date: 05/08/2001

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

- * LARGE, BRIGHT, UNIFORM LIGHT EMITTING AREAS.
- * LOW POWER REQUIREMENT.
- * EXCELLENT ON-OFF CONTRAST.
- * CAN BE USED WITH PANEL AND LEGEND MOUNT.
- * WIDE VIEWING ANGLE.
- * SOLID STATE RELIABILITY.
- * CATEGORIZED FOR LIGHT OUTPUT.

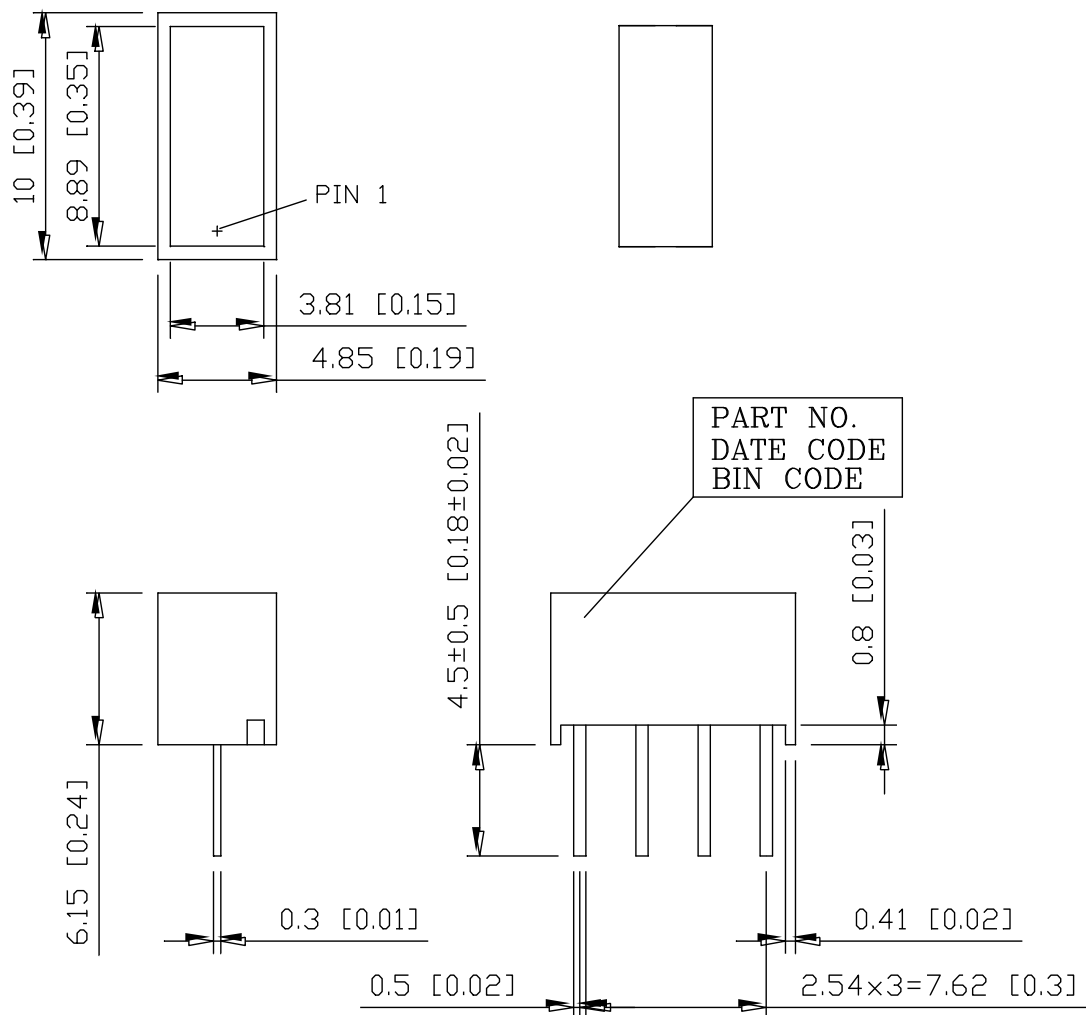
DESCRIPTION

The LTL-2300HR is a rectangular light source display that is designed for a variety of applications where a large bright source of light is required. This device utilizes high efficiency red LED chips that are made from GaAsP on a transparent GaP substrate, and has white bar color.

DEVICE

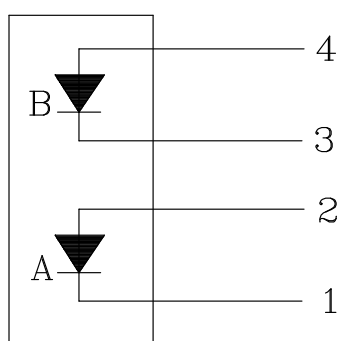
| PART NO. | DESCRIPTION |
|--------------|------------------------------|
| Hi.-Eff. Red | Universal Rectangular Bar |
| LTL-2300HR | |

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 -mm (0.01") unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

| No. | CONNECTION |
|------------|-------------------|
| 1 | CATHODE A |
| 2 | ANODE A |
| 3 | CATHODE B |
| 4 | ANODE B |

ABSOLUTE MAXIMUM RATING AT T_A=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|--|--|--------------------|
| Power Dissipation Per Bar | 75 | mW |
| Peak Forward Current Per Bar (1/10 Duty Cycle, 0.1ms Pulse Width) | 100 | mA |
| Continuous Forward Current Per Bar | 25 | mA |
| Derating Linear From 25 ⁰ C Per Bar | 0.33 | mA/ ⁰ C |
| Reverse Voltage Per Bar | 5 | V |
| Operating Temperature Range | -35 ⁰ C to +85 ⁰ C | |
| Storage Temperature Range | -35 ⁰ C to +85 ⁰ C | |
| Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 ⁰ C | | |

ELECTRICAL / OPTICAL CHARACTERISTICS AT T_A=25°C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION |
|----------------------------|----------------|------|------|------|------|----------------------|
| Average Luminous Intensity | I _v | 1.4 | 4.2 | | mcd | I _F =10mA |
| Peak Emission Wavelength | λ _p | | 635 | | nm | I _F =20mA |
| Spectral Line Half-Width | Δλ | | 40 | | nm | I _F =20mA |
| Dominant Wavelength | λ _d | | 623 | | nm | I _F =20mA |
| Forward Voltage. Per Bar | V _F | | 2 | 2.6 | V | I _F =20mA |
| Reverse Current, Per Bar | I _R | | | 100 | μA | V _R =5V |

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclariage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

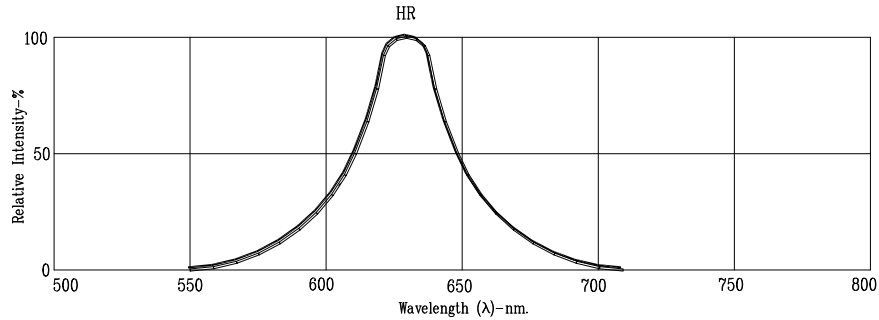


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

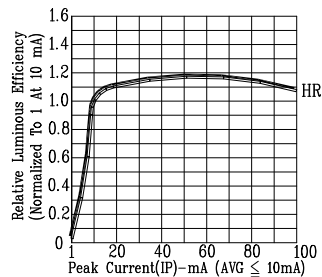


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

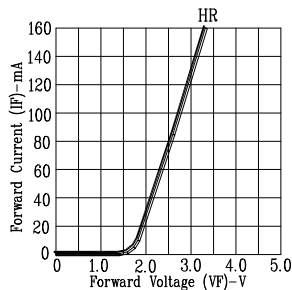


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

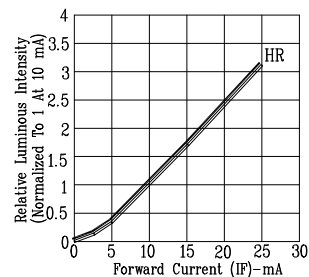


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

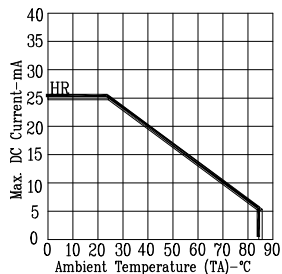


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

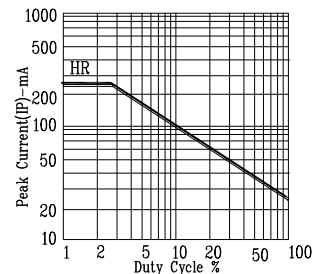


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: HR=HL - EFF. RED