



IR Emitter and Detector Product Data Sheet LTR-536ABM

Spec No.: DS50-2005-012

Effective Date: 05/18/2010

Revision: B

LITE-ON DCC

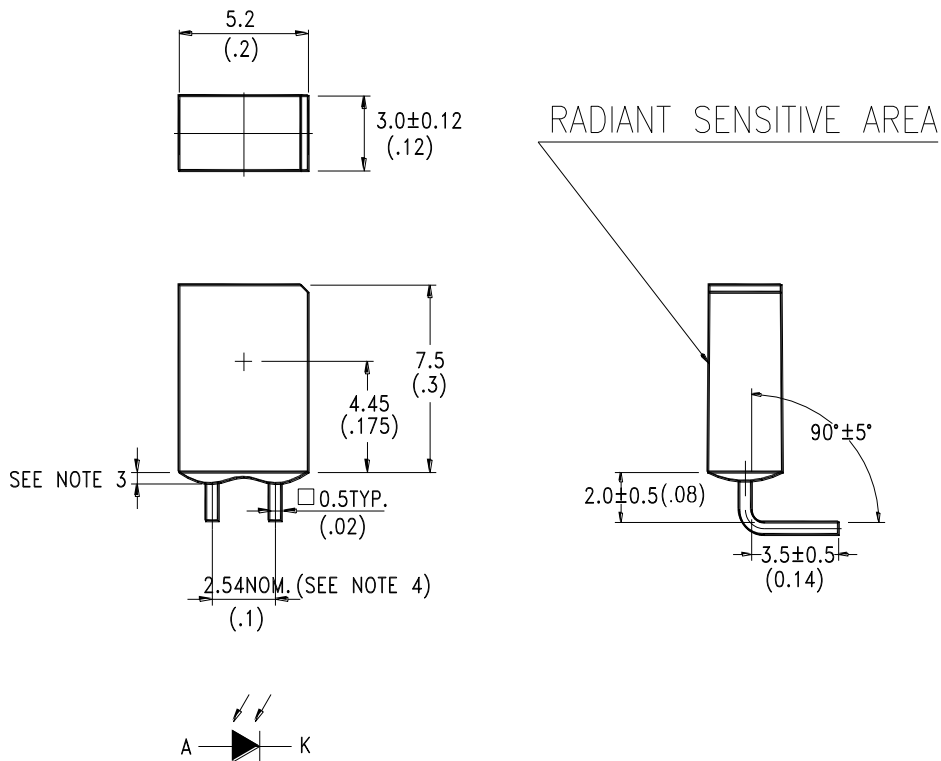
RELEASE

BNS-OD-FC001/A4

FEATURES

- * HIGH PHOTO SENSITIVITY
- * SUITABLE FOR INFRARED RADIATION
- * LOW JUNCTION CAPACITANCE
- * HIGH CUT-OFF FREQUENCY
- * FAST SWITCHING TIME
- * THE LTR-536ABM IS A SPECIAL DARK BLUE PLASTIC PACKAGE THAT CUT THE VISIBLE LIGHT AND SUITABLE FOR THE DETECTORS OF INFRARED APPLICATIONS

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm} (.010\text{'})$ unless otherwise noted.
3. Protruded resin under flange is 1.5mm(.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.



LITE-ON TECHNOLOGY CORPORATION

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ABSOLUTE MAXIMUM RATINGS AT TA=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|--|---------------------|------|
| Power Dissipation | 150 | mW |
| Reverse Voltage | 30 | V |
| Operating Temperature Range | -40°C to + 85°C | |
| Storage Temperature Range | -55°C to + 100°C | |
| Lead Soldering Temperature [1.6mm(.063") From Body] | 260°C for 5 Seconds | |

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION | BIN No. |
|-----------------------------------|--------------------|------|------|------|------|--|---------|
| Reverse Break Down Voltage | V _{(BR)R} | 30 | -- | -- | V | I _R = 100 μA E _e = 0mW/cm ² | |
| Reverse Dark Current Voltage | I _{D(R)} | -- | -- | 30 | nA | V _R = 10V E _e = 0mW/cm ² | |
| Open Circuit Voltage | V _{OC} | -- | 350 | -- | mV | λ = 940nm E _e = 0.5mW/cm ² | |
| Rise Time | T _r | -- | 50 | -- | nsec | V _R = 10V λ = 940nm R _L = 1KΩ | |
| Fall Time | T _f | -- | 50 | -- | nsec | | |
| Short Circuit Current | I _S | 1.7 | -- | 4.6 | μA | V _R = 5V λ = 940nm E _e = 0.1mW/cm ² | BIN A |
| | | 3.4 | -- | 6.9 | | | BIN B |
| | | 5.1 | -- | 9.2 | | | BIN C |
| | | 6.8 | -- | -- | | | BIN D |
| Total Capacitance | C _T | -- | 25 | -- | P | V _R = 3V f = 1MHZ E _e = 0mW/cm ² | |
| Wavelength of the Max Sensitivity | λ _{S MAX} | -- | 900 | -- | nm | | |

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

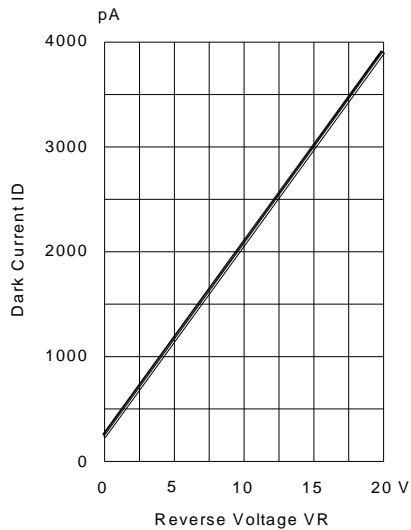


Fig.1 DARK CURRENT VS. REVERSE VOLTAGE
TA=25°C, Ee=0 mW/cm²

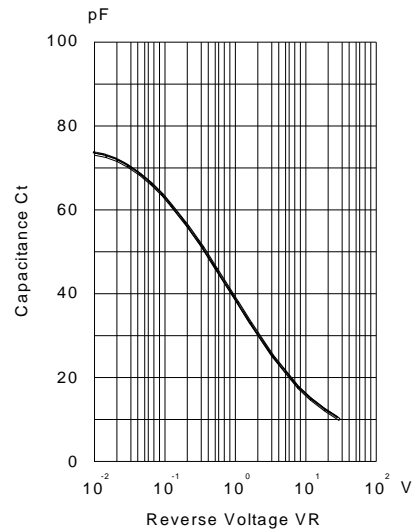


Fig.2 CAPACITANCE VS. REVERSE VOLTAGE
F=1MHZ; Ee=0mW/cm²

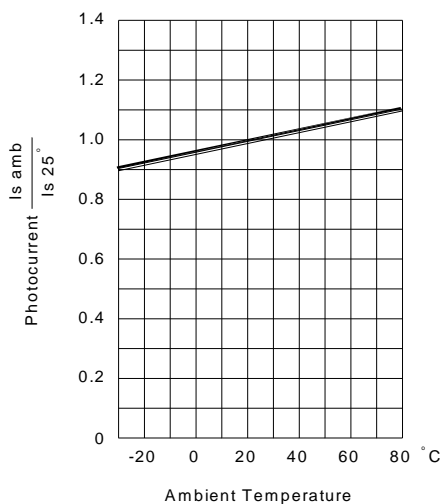


Fig.3 PHOTOCURRENT VS. AMBIENT TEMPERATURE

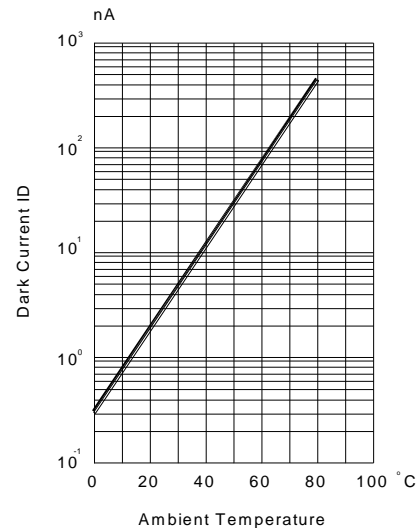


Fig.4 DARK CURRENT VS. AMBIENT TEMPERATURE
VR=10, Ee=0mW/cm²

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

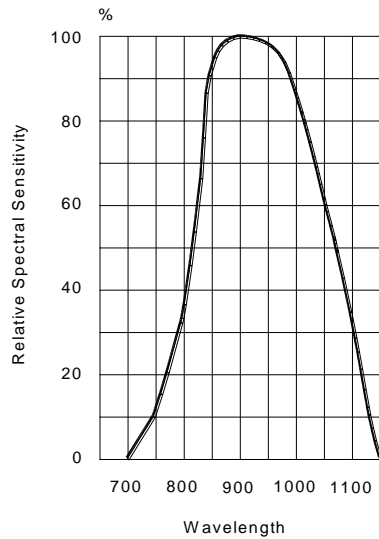


Fig.5 RELATIVE SPECTRAL SENSITIVITY VS WAVELENGTH

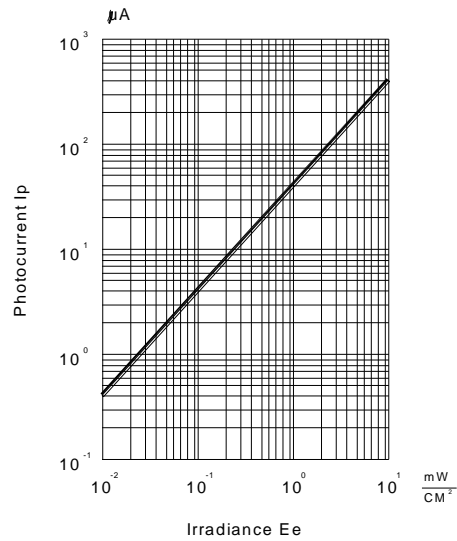


Fig.6 PHOTOCURRENT VS IRRADIANCE $\lambda = 940$ nm

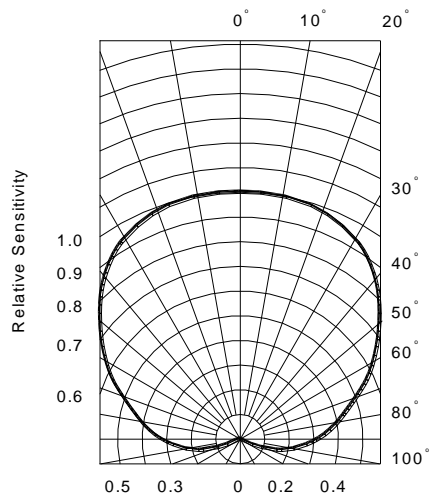


Fig.7 SENSITIVITY DIAGRAM

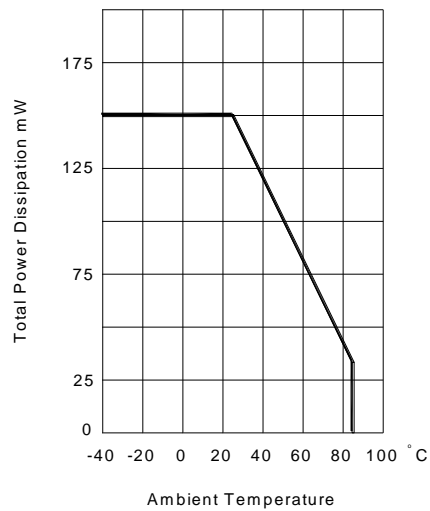


Fig.8 TOTAL POWER DISSIPATION VS AMBIENT TEMPERATURE