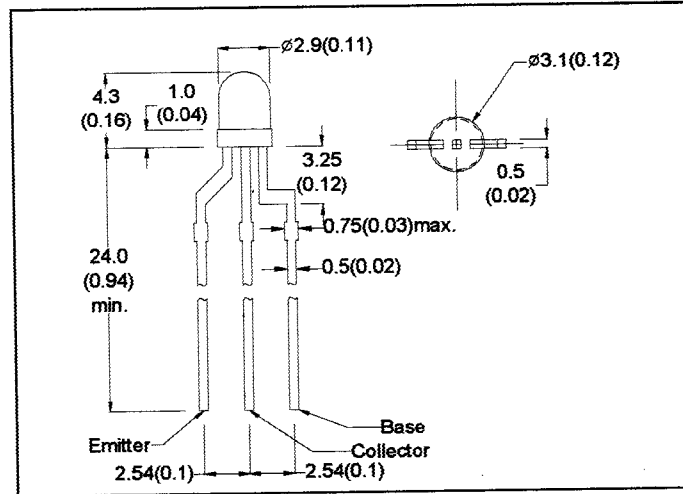


DESCRIPTION

MEL708 is NPN silicon photo-transistor with external base connection and built in a standard T-1 (3mm) water clear package.

This device is suitable for use in a light sensor of the industrial control application.

The availability of base lead also allows the circuit designer to optimise their design.



- All Dimension in mm (inch)
- No Scale
- Tol : +/- 0.3mm

ABSOLUTE MAXIMUM RATINGS

| | | |
|--|------------------|------------------|
| Collector-Emitter Voltage | V _{CEO} | 30V |
| Emitter-Base Voltage | V _{EB0} | 5V |
| Collector Current | I _C | 50mA |
| Peak Collector Current | I _{CP} | 100mA |
| Power Dissipation (T _a =25°C) | P _{tot} | 200mW |
| Operating & Storage Temperature | T _{stg} | -55 to +100°C |
| Lead Soldering Temperature (1/16" from body) | | 260°C for 5 sec. |

ELECTRO-OPTICAL CHARACTERISTICS (T_a=25°C)

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT | CONDITIONS | |
|--------------------------------------|---------------------------------|----------|-------|------|--------|--|---|
| Collector-Base Breakdown Voltage | BV _{CB0} | 50 | | | V | I _C =100 μA | |
| Collector-Emitter Breakdown Voltage | BV _{CEO} | 30 | | | V | I _C =1mA | |
| Emitter-Collector Breakdown Voltage | BV _{EC0} | 5 | | | V | I _{EC} =100 μA | |
| Dark Current | I _D | | | 100 | nA | V _{CE} =5V E _e =0 | |
| Light Current | I _L | | | | mA | V _{CE} =5V E _e =5mW/cm ² * | |
| | | MEL708 | 0.25 | 1.50 | | mA | V _{CE} =5V E _e =5mW/cm ² * |
| | | MEL708-A | 0.50 | | 1.90 | mA | V _{CE} =5V E _e =5mW/cm ² * |
| Rise / Fall Time | T _R / T _F | | 15/15 | | us | V _{CE} =5V I _C =1mA R _L =1000 Ω | |
| Collector-Emitter Saturation Voltage | V _{CE(sat)} | | | 0.6 | V | I _C =2mA I _B =100 μA | |
| Viewing Angle | 2θ 1/2 | | 138 | | degree | I _F =20mA | |

* Measured at noted irradiance as emitted from tungsten filament lamp at a color temperature of

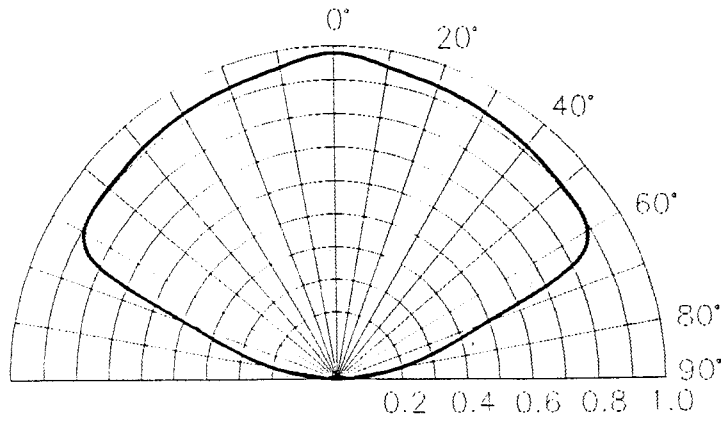
Rev. C.

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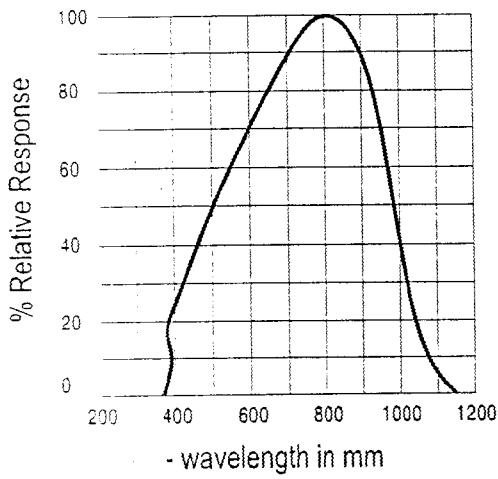
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MEL708

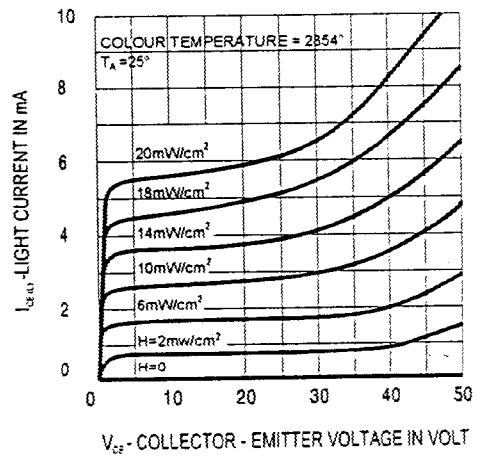


MEL708 VIEW ANGLE

Spectral Characteristics



LIGHT CURRENT VS COLLECTOR-EMITTER VOLTAGE



COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

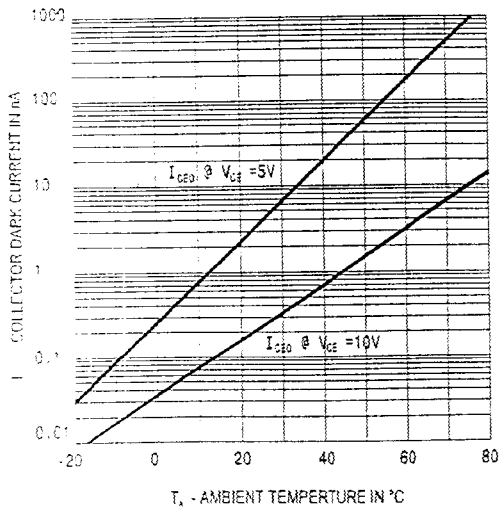


PHOTO CURRENT CHARACTERISTICS

