

HP - 3ML · HP - 3MLR2

The HP - 3ML is a high - output, high - speed photodiode mounted in a TO - 18 type header with clear epoxy encapsulation, The HP - 3MLR2 photodiode, with daylight filter, is available in the same package.

FEATURES

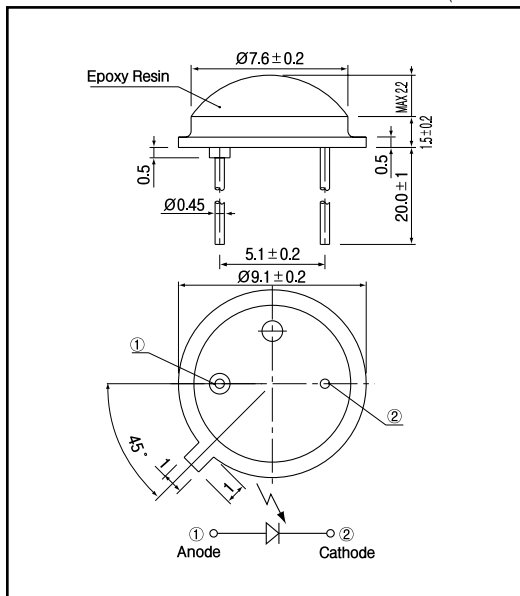
- High - output power
- High - speed response
- Wide angular response
- Relatively low - cost against metal can package

APPLICATIONS

- Optical detectors
- Optical switches

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

| Item | Symbol | Rating | Unit |
|--------------------|------------|--------------|------|
| Reverse voltage | V_R | 5 | V |
| Operating temp. | $T_{opr.}$ | - 20 ~ + 80 | |
| Storage temp. | $T_{stg.}$ | - 30 ~ + 100 | |
| Soldering temp. ** | $T_{sol.}$ | 260 | |

*1. For MAX.5 seconds at the position of 2 mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

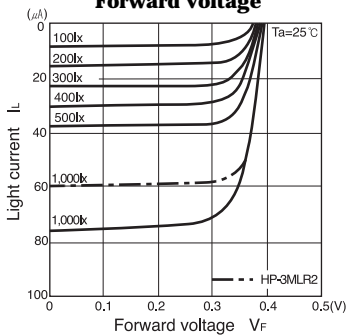
| Item | Symbol | Conditions | HP - 3ML | | | HP - 3MLR2 | | | Unit. |
|-------------------------------------|----------|----------------------|-------------|-------|------|-------------|-------|------|---------|
| | | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Open circuit voltage | V_{oc} | $E_v = 1,000lx^{-2}$ | | 0.38 | | | 0.30 | | V |
| Short circuit current | I_{sc} | | 54 | 75 | | | 60 | | μA |
| Dark current | I_d | $V_R = 5V$ | | | 1 | | | 10 | μA |
| Curve factor | C.F. | | 0.55 | | | 0.55 | | | - |
| Capacitance | C_t | $V = 0V, f = 1MHz$ | | 180 | | | 180 | | pF |
| Temperature coefficient of V_{oc} | t | | | - 2.2 | | | - 2.2 | | mV/ |
| Temperature coefficient of I_{sc} | t | | | 0.18 | | | 0.18 | | %/ |
| Spectral sensitivity | | | 450 ~ 1,050 | | | 700 ~ 1,050 | | | nm |
| Peak wavelength | ρ | | 900 | | | 940 | | | nm |
| Half angle | | | ± 60 | | | ± 60 | | | deg. |

*2. Color temp. = 2856K standard Tungsten lamp

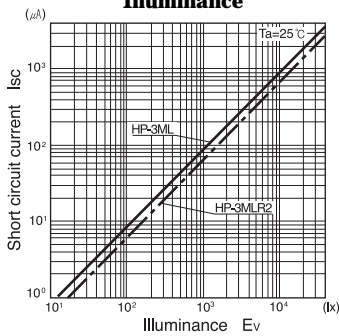
Photo diodes

HP - 3ML · HP - 3MLR2

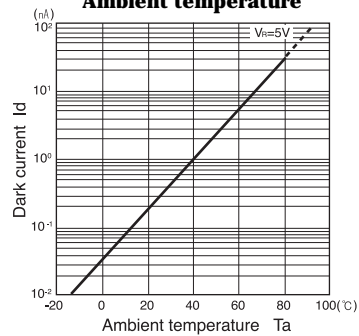
Light current Vs. Forward voltage



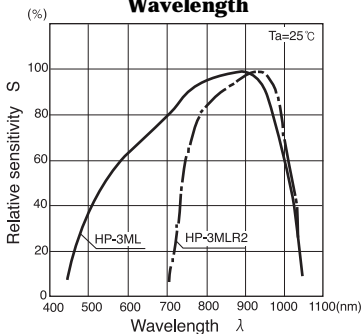
Short circuit current Vs. Illuminance



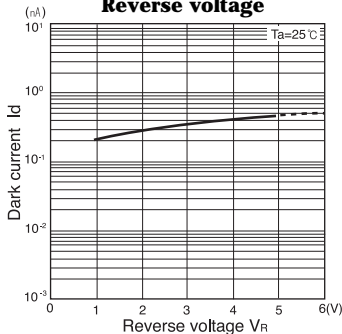
Dark current Vs. Ambient temperature



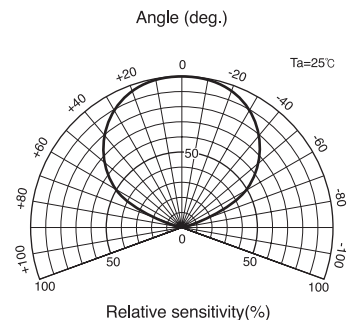
Relative sensitivity Vs. Wavelength



Dark current Vs. Reverse voltage



Radiant Pattern



Capacitance between terminals Vs. Reverse voltage

