MICRO ELECTRONICS

MEL708

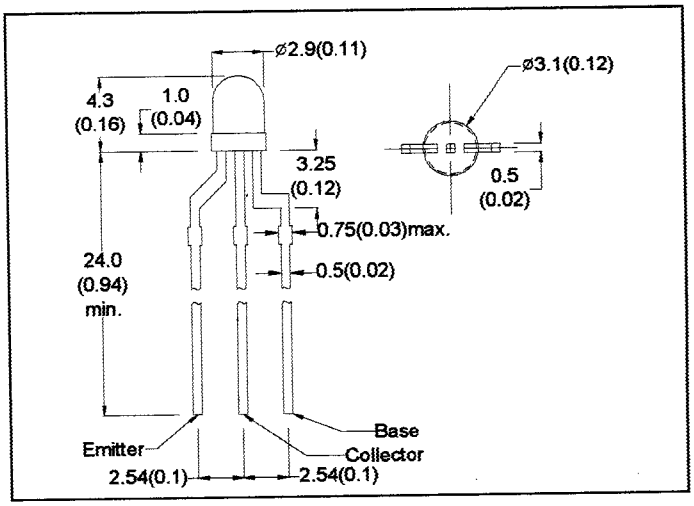
NPN SILICON PHOTO TRANSISTOR

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 abailability 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	VCEO	30V
Emitter-Base Voltage	VEBO	5V
Collector Current	IC	50mA
Peak Collector Current	ICP	100mA
Power Dissipation (Ta=25°C)	Ptot	200mW
Operating & Storage Temperature	Tstg	-55 to +100°C
Lead Soldering Temperature (1/16" from body)		260°C for 5 sec.

ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	CONDITIONS
Collector-Base Breakdown Volage	BV_{CBO}	50			V	I_C=100 μA
Collector-Emitter Breakdown Voltage	BV_{CEO}	30			V	I_C=1mA
Emitter-Collector Breakdown Voltage	BV_{ECO}	5			V	I_{EC}=100 μA
Dark Current	ID			100	nA	VCE=5V Ee=0
Light Current	IL				mA	VCE=5V Ee=5mW/cm² *
MEL708		0.25	1.50		mA	VCE=5V Ee=5mW/cm² *
MEL708-A		0.50		1.90	mA	VCE=5V Ee=5mW/cm² *
Rise / Fall Time	T_R / T_F		15/15		us	V_{CE}=5V I_C=1mA R_L=1000Ω
Collector-Emitter Saturation Voltage	VCE(sat)			0.6	V	IC=2mA IB=100μA
Viewing Angle	2θ 1/2		138		degree	I_F=20mA

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

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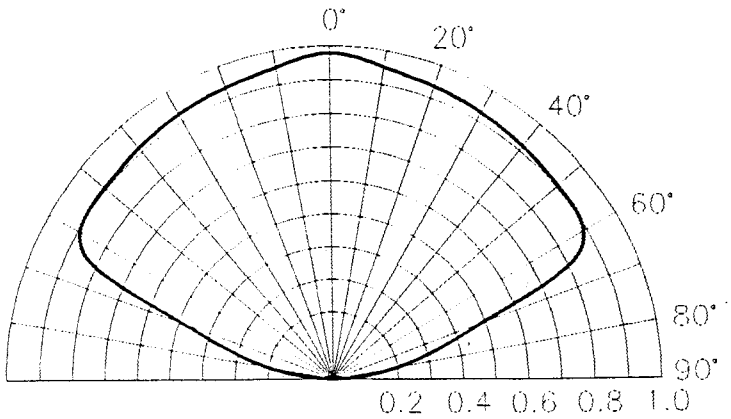
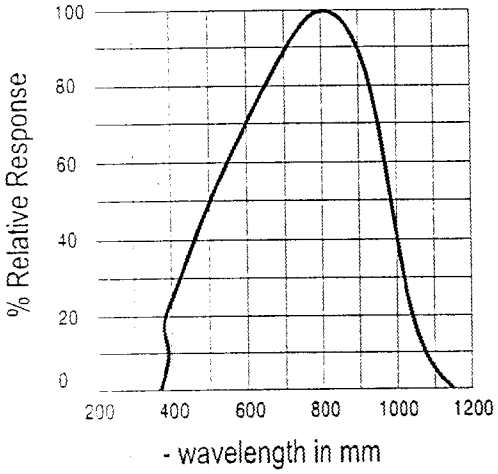
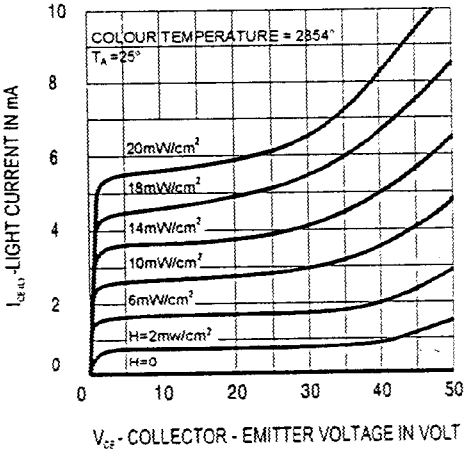


MEL708 VIEW ANGLE

Spectral Characteristics



LIGHT CURRENT
VS
COLLECTOR-EMITTER VOLTAGE



COLLECTOR DARK CURRENT
VS
AMBIENT TEMPERATURE

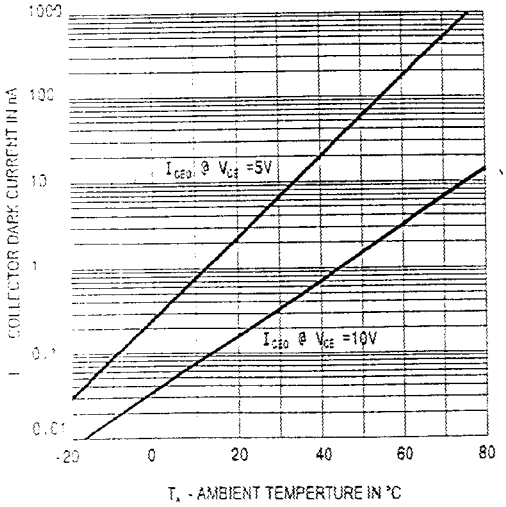
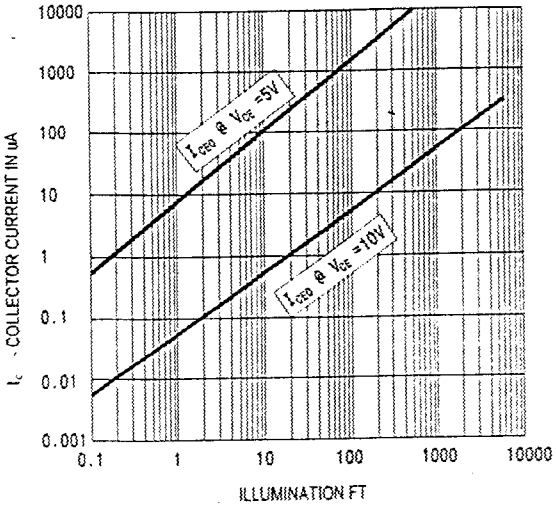


PHOTO CURRENT CHARACTERISTICS



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