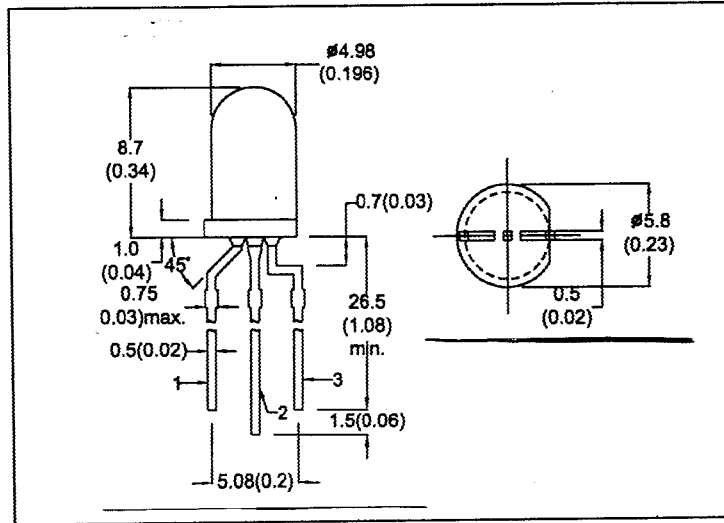


## DESCRIPTION

MEL709 is NPN silicon photo-transistor with external base connection and built in a standard T-1 3/4 (5mm) water clear package.

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



- 1 - Base
- 2 - Collector
- 3 - Emitter
- All Dimension in mm (inch)
- No Scale
- Tol: +/- 0.3mm

## ABSOLUTE MAXIMUM RATINGS

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

## ELECTRO-OPTICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	50			V	I <sub>C</sub> =100 μA
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	30			V	I <sub>C</sub> =1mA
Emitter-Collector Breakdown Voltage	BV <sub>ECO</sub>	5			V	I <sub>EC</sub> =100 μA
Dark Current	I <sub>D</sub>			1	μA	V <sub>CE</sub> =20V E <sub>e</sub> =0
Light Current	I <sub>L</sub>				mA	V <sub>CE</sub> =5V E <sub>e</sub> =5mW/cm <sup>2</sup> *
	MEL709 I <sub>L</sub>	4	1.5		mA	V <sub>CE</sub> =5V E <sub>e</sub> =5mW/cm <sup>2</sup> *
	MEL709-A I <sub>L</sub>	0.5		1.9	mA	V <sub>CE</sub> =5V E <sub>e</sub> =5mW/cm <sup>2</sup> *
Rise / Fall Time	TR / TF		15/15		us	V <sub>CE</sub> =5V I <sub>C</sub> =1mA R <sub>L</sub> =1000Ω
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>			0.6	V	I <sub>C</sub> =2mA I <sub>B</sub> =100μA

\* Measured at noted irradiance as emitted from tungstun filament lamp at a color temperature of 2854°K.

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