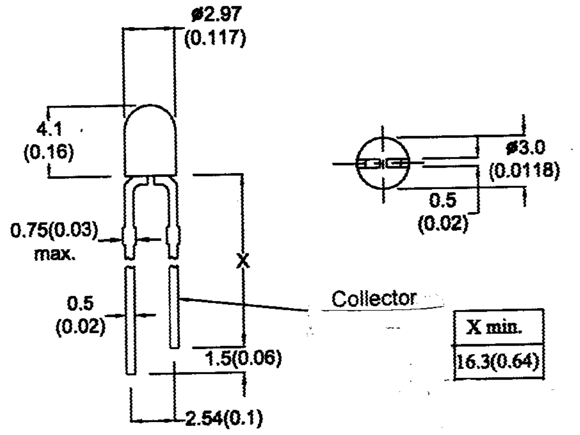
NPN SILICON
PHOTO
TRANSISTOR

DESCRIPTION

MEL82 is NPN silicon planar phototransistor. It is encapsulated in a 3mm diameter, low profile and flangeless water clear transparent epoxy package.

It features ultra high illumination sensitivity, fast response time, and spectrally matched with the infra-red emitter MI38T series.



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

ABSOLUTE MAXIMUM RATINGS

Collector-Emitter Voltage	VCEO	20V
Emitter-Collector Voltage	VECO	5V
Continuous Power Dissipation	Pd	50mW
Operating Junction Temperature	Tj	-40 to +85°C
Storage Temperature Range	Tstg	-40 to +100°C

ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C)

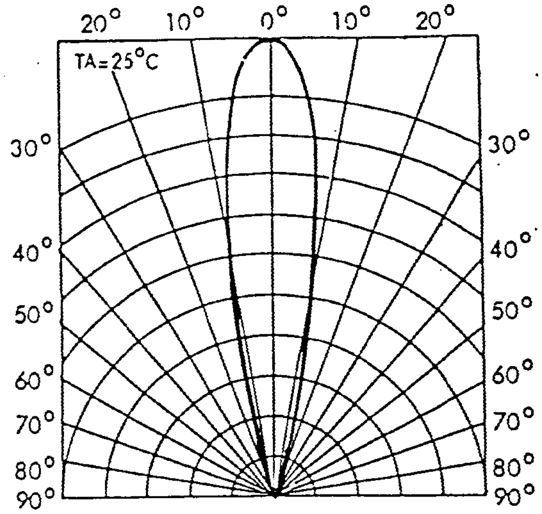
PARAMETER	SYMBOL	MIN	MAX	UNIT	CONDITIONS
Collector-Emitter Breakdown Voltage	BVCEO	20		V	IC=100μA Ee=0
Emitter-Collector Breakdown Voltage	BVECO	5		V	IC=100μA Ee=0
Dark Current	ID		100	nA	VCE=10V Ee=0
Light Current	IL	3.5		mA	VCE=5V Ee=5mW/cm² *
Collector-Emitter Saturation Voltage	VCE(sat)		0.3	V	IC=500μA Ee=20mW/cm²
Rise Time	Tr	3	TYP	μs	Vcc=5V IC=4mA RL=100ohm
Fall Time	Tf	3	TYP	μs	Vcc=5V IC=4mA RL=100ohm

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

MICRO ELECTRONICS LTD.
38, Hung To Road, Microtron Bulding, Kwun Tong, Kowloon, Hong Kong.
Kwun Tong P.O. Box 69477 Hong Kong. Fax No. 2341 0321 Telex:43510 Micro Hx. Tel: 2343 0181-5

MEL82 TYPICAL CHARACTERISTICS

ANGULAR RESPONSE



SPECTRAL CHARACTERISTICS

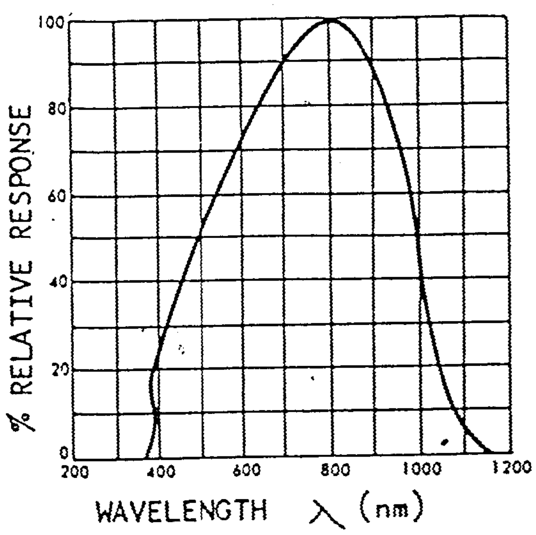
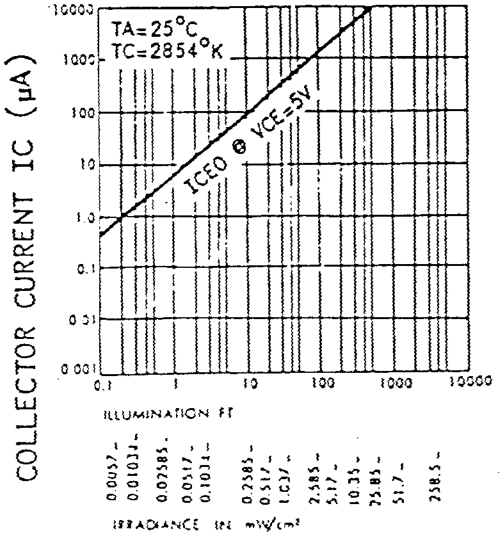


PHOTO CURRENT CHARACTERISTICS



LIGHT CURRENT VS COLLECTOR-EMITTER VOLTAGE