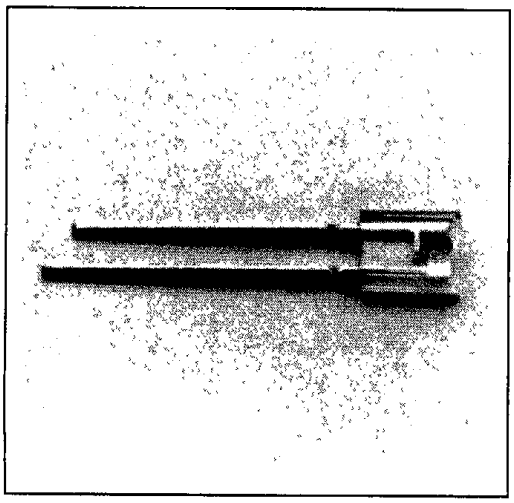
SIEMENS

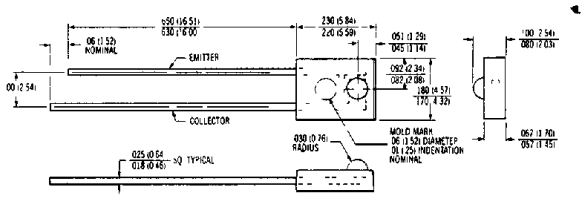
LPT85A

PHOTOTRANSISTOR

T-41-61



Package Dimensions in Inches (mm)



FEATURES

- **Low Cost Plastic Package**
- **Very High Sensitivity**
- **Matches Infrared Emitter IRL80A and IRL81A**

DESCRIPTION

The LPT85A is a plastic, NPN phototransistor It comes in a lensed, clear plastic, side-facing, miniature package. Its spheric lens was designed to accept light from very wide angles (±40°). This sensitive detector is ideal for a wide variety of industrial processing and control applications which require a beam interruption

Maximum Ratings

Collector Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	50	mA
Storage and Operating Temperature	T	−40 to +100	°C
Maximum Permissible Soldering Temperature Range (t≤5 sec)	T_S	240	°C
Power Dissipation (T_{amb} = 25°C)	P_{TOT}	100	mW*
*Derate above 25°C Linearly		1 33	mW/°C

Characteristics (T_{amb} = 25°C)

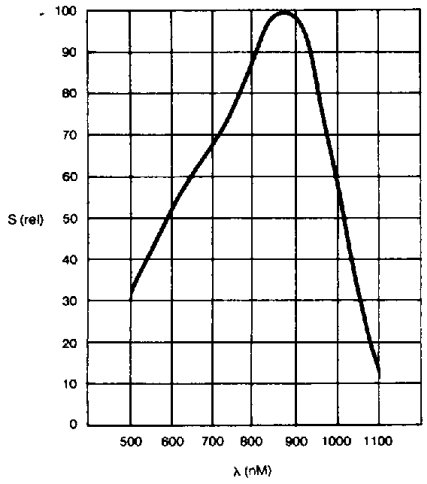
Collector-Emitter Leakage Current (V_{CE} = 15 V, H = 0)	I_{CEO}	≤100	nA
Wavelength of the Max Sensitivity		870	nm
Acceptance Half Angle	φ	±40	Deg
Breakdown Voltage (I_C = 100 μA, H = 0 mW/cm²)	BV_{CEO}	5 V min	@I_C = 100μA
Photocurrent(1) (V_{CE} = 5 V, H = 0 5 mW/cm²)	I_P	0 9	-mA
Saturation Voltage (I_C = 250 μA, H = 0 5 mW/cm²)	$V_{CE(SAT)}$	0 15 V typ	0 4 V max

Note 1
The light source is a tungsten filament bulb used in conjunction with a 950 ±3 nm filter The mechanical axis of the DUT is aligned with the light source

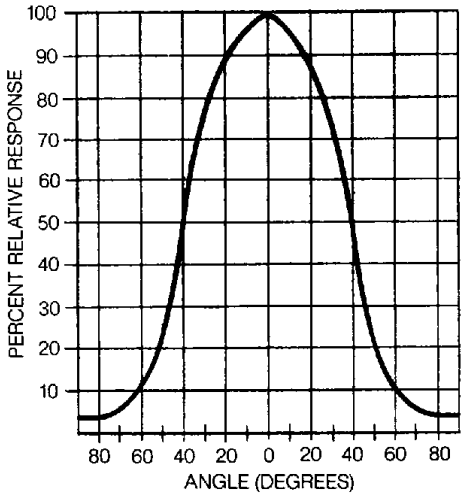
Phototransistors/ Photodarlington

Typical Optoelectronic Characteristics

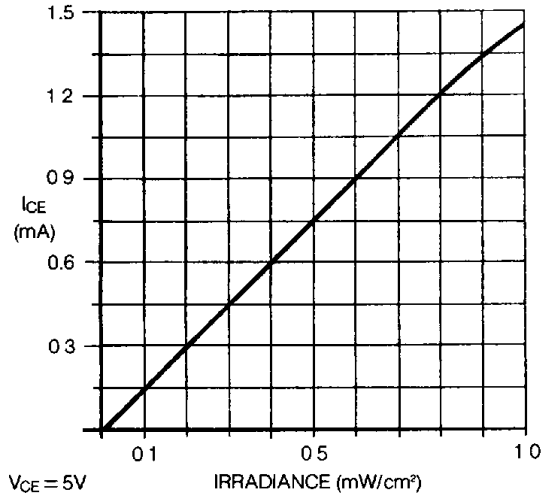
Relative Spectral Sensitivity



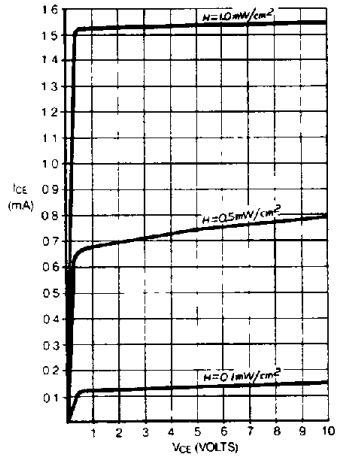
Angular Response



I_{CE} versus Irradiance



I_{CE} versus $V_{CE)}$



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