

MINIATURE LAMP DEPARTMENT



SOLID STATE LAMP
BULLETIN 3-7041

LAMP TYPE — SOLID STATE SSL-1

APPLICATION — INDICATOR, PHOTOCCELL DRIVER

DESCRIPTION — The Miniature Lamp Department expands its line of solid state lamps (also known as L.E.D.'s or light emitting diodes). First Electroluminescent and now the SSL-1, a semiconductor crystal lamp with visible light output of .8 footlamberts per milliamp — highest *visible* light output of any L.E.D.

This low voltage lamp is mounted on a standard TO-18 gold header with gold case and lens window. Solderable wire terminal leads will fit into a *standard* transistor socket.

The solid state construction of the SSL-1 offers these many advantages:

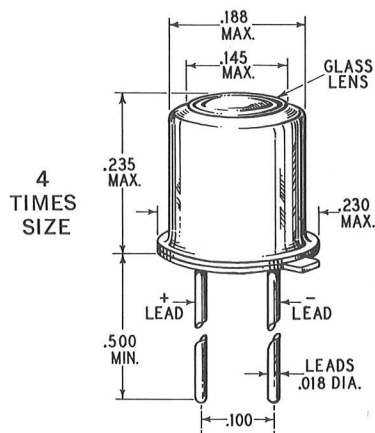
- MORE VISIBLE LIGHT than any other L.E.D. at present.
- LONG LIFE **no** theoretical failure if operated at ratings shown.
- MORE RUGGED than any filament or glow lamps
- VIBRATION AND SHOCK RESISTANT
- FAST SWITCHING
- HIGH RELIABILITY
- SMALL SIZE—LOW VOLTAGE
- LESS SENSITIVE TO AMBIENT CHANGE than electroluminescent and 2 to 5 times brighter.

MECHANICAL SPECIFICATIONS

Maximum Overall Length—0.235 inches (excluding leads)

Maximum Diameter: Header — 0.230 inches
Case — 0.188 inches

Leads — .016 — .019 inches diameter
0.5 inches length



ELECTRICAL SPECIFICATIONS (TENTATIVE)

MAXIMUM DC RATINGS

Reverse Voltage	5 volts
Forward Direct Current	75 milliamps
Storage Temperature	-65°C to 125°C

TYPICAL DC CHARACTERISTICS AT 25°C AMBIENT

V _f (Forward Voltage @ 50 ma)	3.5 volts
Brightness (end on @ 50 ma)	40 footlamberts
Rise Time to 2/3 max. Brightness @ 50 ma. <	100 microseconds
Fall Time to 1/3 max. Brightness @ 50 ma. <	100 microseconds
Peak Spectral Emission	5900 angstroms
.707 Peak Band Width	5500-6300 angstroms

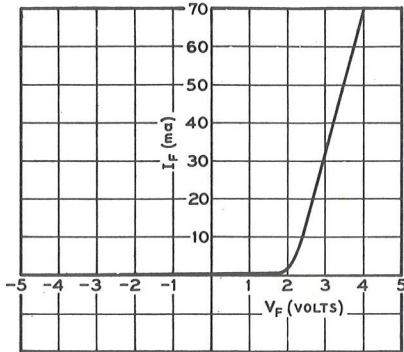
Typical Characteristics Curves
Shown on Reverse Side



TYPICAL CHARACTERISTICS

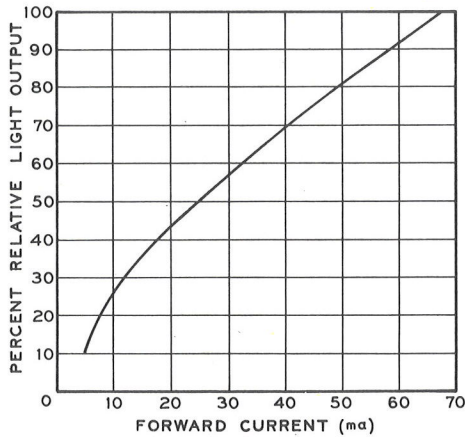
SSL-1

VOLTAGE
VS
CURRENT



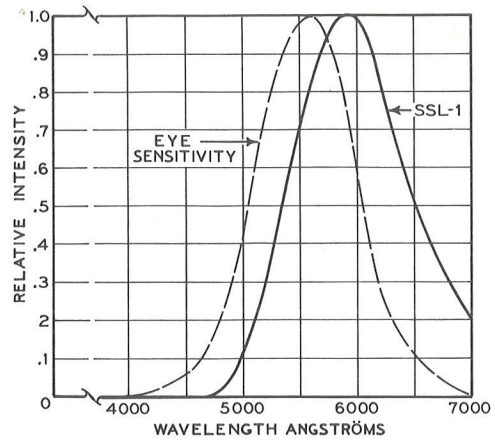
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FORWARD CURRENT
VS
PERCENT RELATIVE LIGHT OUTPUT



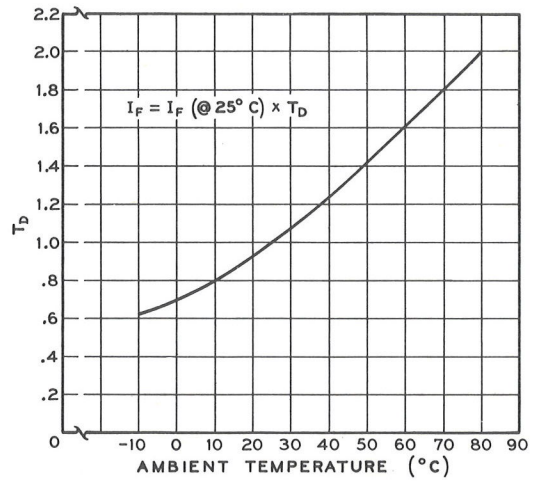
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WAVELENGTH
VS
RELATIVE INTENSITY



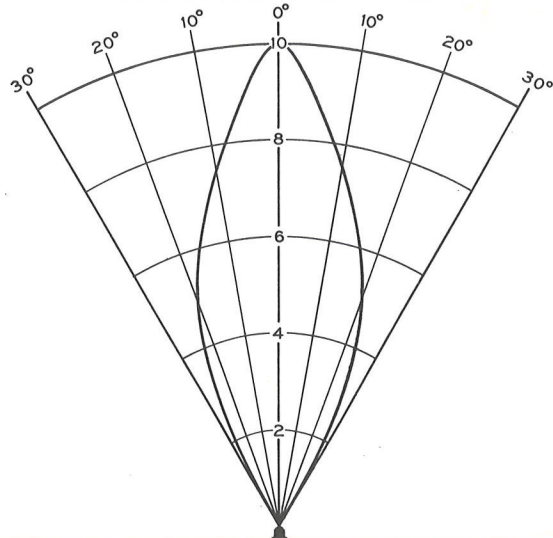
SSL-1

TEMPERATURE DERATING CURVE



SSL-1

TYPICAL RADIATION PATTERN



MINIATURE LAMP DEPARTMENT
GENERAL ELECTRIC