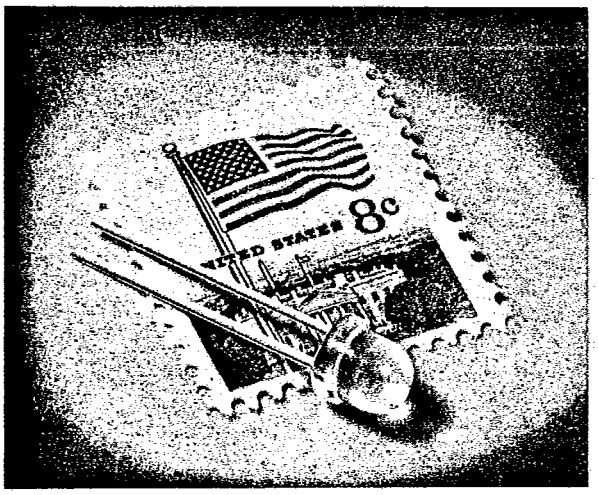
eldema/genisco solid-state lamps

GaAsP LED
Back Lighting Lamp
135-3430

D. S. No. SSD-200–2/73

HIGH INTENSITY LED LAMPS FOR BACK-LIGHTING APPLICATIONS

- **OPTIMIZES ILLUMINATION OF ANY CAP OR CARTRIDGE**
- **LOW POWER CONSUMPTION**
- **COMPATIBLE WITH DIGITAL ICs**
- **FIT STANDARD T-1¾ LAMP HOUSINGS**



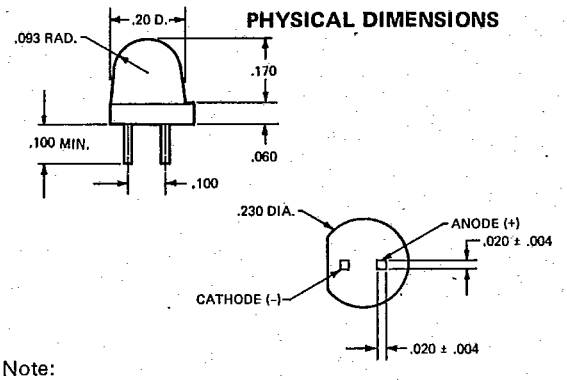
ELDEMA Model 135-3430 gallium arsenide phosphide (GaAsP) light emitting diode (LED) lamps are highly reliable, low in cost, and are easily read over a wide viewing angle. The light sources can be driven directly from low level digital integrated circuit outputs, emit light in the 600 to 700 nm red region of the spectrum, and have fast "turn-on/off" times.

Model 135-3430 solid-state lamps offer the highest reliability and lowest power requirements of any device for back-lighting annunciator applications. These shock and vibration resistant lamps are encapsulated in milky white plastic, and optimize the illumination pattern for any back-lighting lens cap or cartridge.

Maximum Ratings

Forward DC Current	50 mA
Peak Forward Current (1 μsec pulse, 300 pps)	1A
Reverse Voltage	3 V
Power Dissipation—Derate 1.6 mW/°C above 25°C	120 mW
Storage Temperature	-55 to +100°C
Operating Temperature	-55 to +100°C
Relative Humidity @ 65°C	98%
Solder Temperature for 5 seconds 0.1" from Case	260°C

PHYSICAL DIMENSIONS



Note:
All dimensions + .010" unless otherwise specified. All leads electrically isolated from case.

Electrical Characteristics (25°C)

Characteristic	Symbol	Units	Minimum	Typical	Maximum
Forward Voltage @ I_F = 20 mA	V_F	V	–	1.7	2.0
Reverse Breakdown Voltage @ I_R = 10 μA	BV_R	V	3.0	8.0	–

Optoelectrical Characteristics @ I_F = 20 mA (25°C)

Characteristic	Symbol	Units	Minimum	Typical
Luminous Intensity	I	mcd (Note 1)	1.0	2.5
Luminance	L	mcd/cm2 (Note 2)	–	15
Average Emitting Area	A	cm^2	–	0.17
Wavelength at Peak Emission	λ_{pk}	nm	–	665
Spectral Width Between Half-Power Points	$\Delta\lambda$	nm	–	20
Rise and Fall Times	t_r and t_f	ns (Note 3)	–	10

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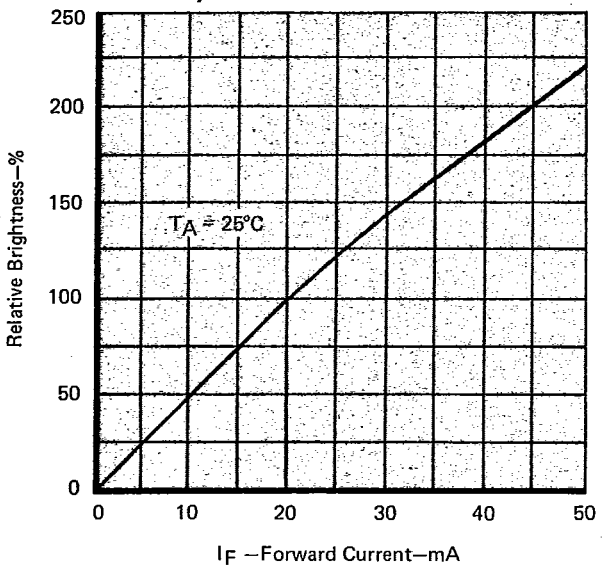
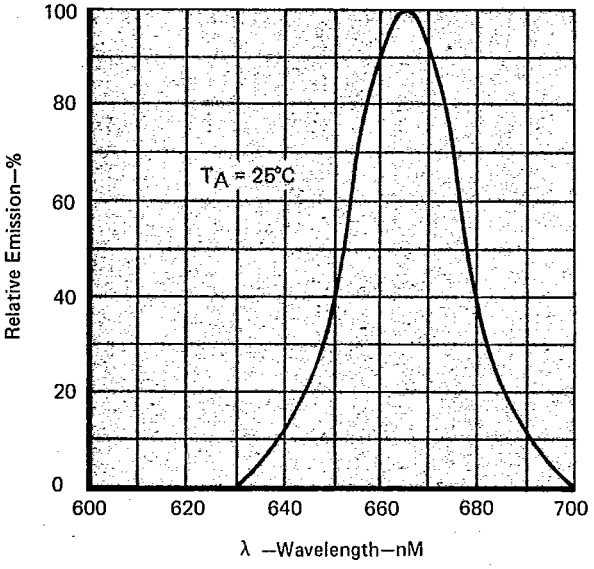
NOTES:
1. Measured on mechanical axis of package.
2. 1 cd/cm2 = 2.92 x 10^3 ft lamberts.
3. Time for a 10%–90% change in light intensity with a step change in current.

TYPICAL PERFORMANCE CURVES (135-3430)

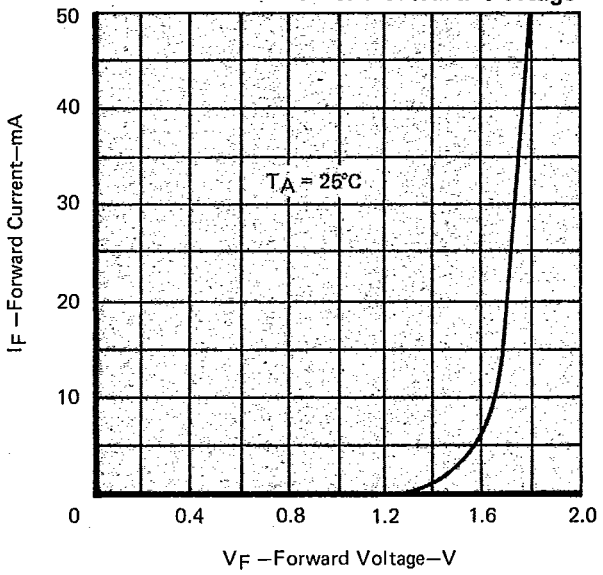
Intensity Vs. Forward Current (Note 4)



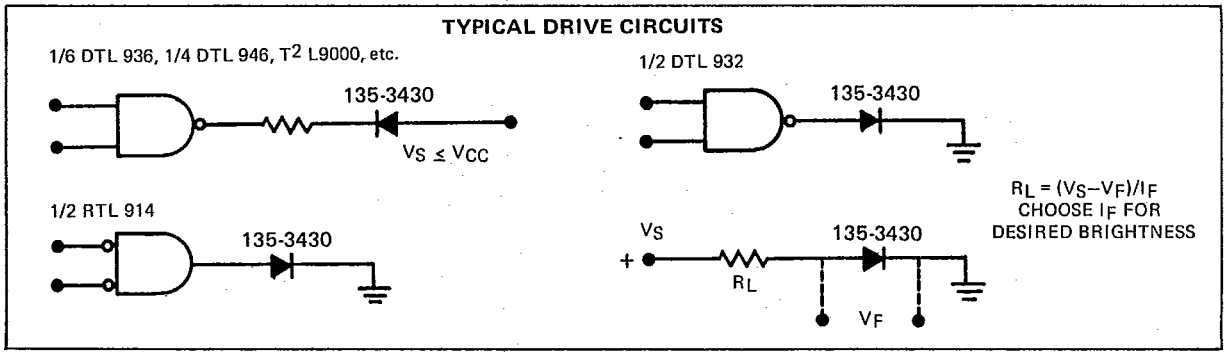
Emission Spectrum



Forward Current Vs. Forward Voltage



TYPICAL DRIVE CIRCUITS



4. Luminous intensity curve coincides with radiant intensity curve for pulse excitation (for average currents of 20 mA or less).

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