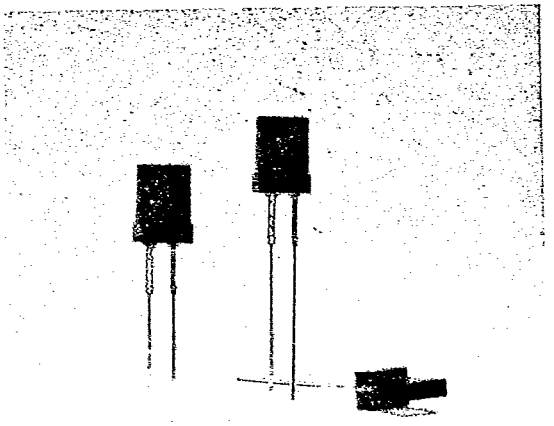
LITE-ON LED SPECIALIST

RECTANGULAR BAR LED LAMPS

LTL-3215S BRIGHT RED **LTL-3255S YELLOW**
LTL-3235S GREEN **LTL-3295S ORANGE**

FEATURES

- LOW POWER CONSUMPTION.
- MOST SUITABLE FOR USE LIKE LEVEL INDICATOR.
- EXCELLENT UNIFORMITY OF LIGHT EMITTANCE.
- LONG LIFE-SOLID STATE RELIABILITY.
- I.C. COMPATIBLE.



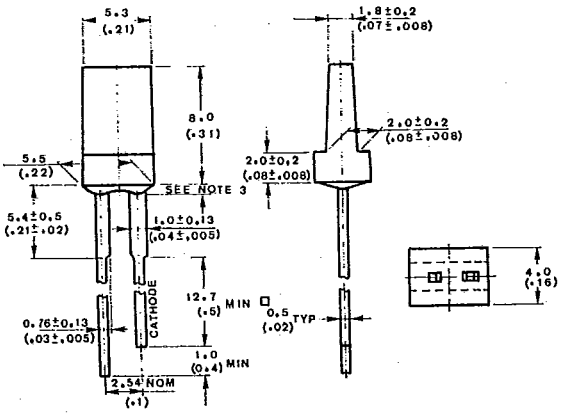
DESCRIPTION

The Bright Red source color devices are made with Gallium Phosphide on Gallium Phosphide Red Light Emitting Diode.
The Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.
The Green source color devices are made with Gallium Phosphide on Gallium Phosphide Green Light Emitting Diode.
The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

DEVICES

PART NO. LTL–	LENS		SOURCE COLOR
	COLOR	DIFFUSION	
3215S	Red	Diffused	Bright Red
3235S	Green	Diffused	Green
3255S	Yellow	Diffused	Yellow
3295S	Orange	Diffused	Orange

PACKAGE DIMENSIONS



NOTES:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.5mm (.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

ABSOLUTE MAXIMUM RATINGS AT T_A = 25°C

PARAMETER	BRIGHT RED	GREEN	YELLOW	ORANGE	UNIT
Power Dissipation	40	100	60	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	60	120	80	120	mA
Continuous Forward Current	15	30	20	30	mA
Derating Linear From 25°C	0.2	0.4	0.25	0.4	mA/°C
Reverse Voltage	5	5	5	5	V
Operating Temperature Range	-55°C to +100°C				
Storage Temperature Range	-55°C to +100°C				
Lead Soldering Temperature [1.6mm (0.063in) From Body]	260°C for 5 Seconds				

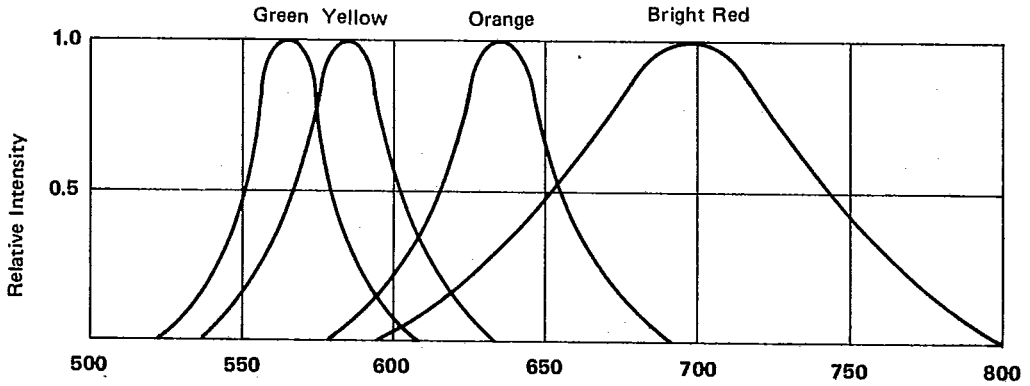


FIG. 1 RELATIVE INTENSITY VS. WAVELENGTH

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT T_A = 25°C

PARAMETER	SYMBOL	PART NO. LTL—	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	Iv	3215S	0.2	0.4		mcd	I_F = 10 mA Note 1
Viewing Angle	2θ½	3215S		150		deg.	Note 2 (Fig. 6)
Peak Emission Wavelength	λPEAK	3215S		697		nm	Measurement @ Peak (Fig. 1)
Spectral Line Half Width	Δλ	3215S		90		nm	
Forward Voltage	V_F	3215S		2.1	2.8	V	I_F = 20 mA
Reverse Current	I_R	3215S			100	μA	V_R = 5V
Capacitance	C	3215S		55		PF	V_F = 0 f = 1 MHZ

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NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.
2. θ½ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

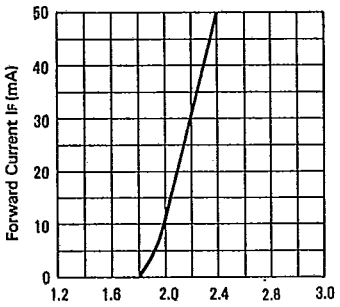

FIG. 2 FORWARD CURRENT VS. FORWARD VOLTAGE.

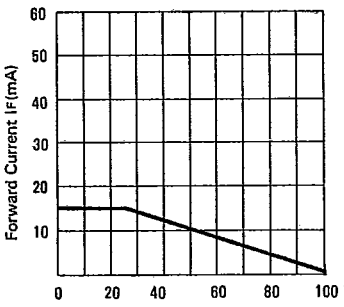

FIG. 3 FORWARD CURRENT DERATING CURVE.

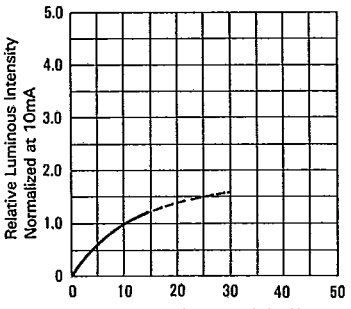

FIG. 4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

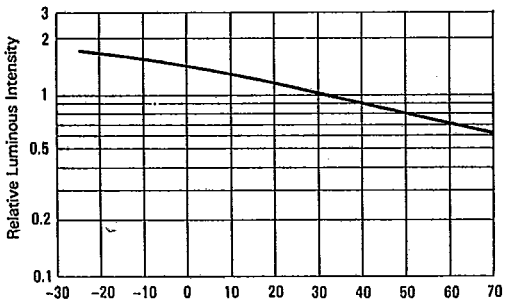

FIG.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

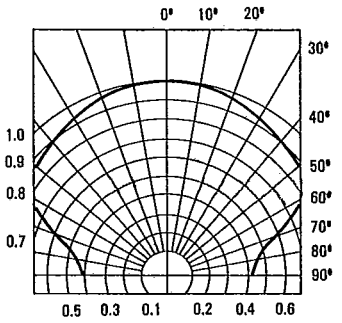

FIG. 6 SPATIAL DISTRIBUTION

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT T_A = 25°C

PARAMETER	SYMBOL	PART NO. LTL–	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	Iv	3235S 3255S	0.3 0.4	0.8 1.1		mcd	I_F = 10 mA Note 1
Viewing Angle	2θ½	3235S 3255S		150		deg.	Note 2 (Fig. 11)
Peak Emission Wavelength	λPEAK	3235S 3255S		565 585		nm	Measurement @ Peak (Fig. 1)
Spectral Line Half Width	Δλ	3235S 3255S		30 35		nm	
Forward Voltage	V_F	3235S 3255S		2.1	2.8	V	I_F = 20 mA
Reverse Current	I_R	3235S 3255S			100	μA	V_R = 5V
Capacitance	C	3235S 3255S		35 15		PF	V_F = 0 f = 1 MHZ

NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.
2. θ½ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

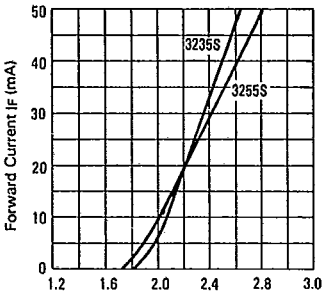

FIG. 7 FORWARD CURRENT VS. FORWARD VOLTAGE

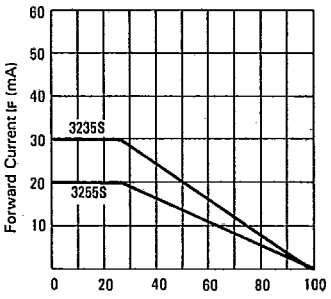

FIG. 8 FORWARD CURRENT DERATING CURVE

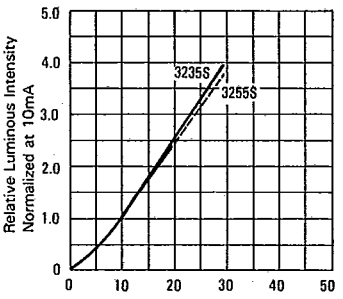

FIG. 9 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

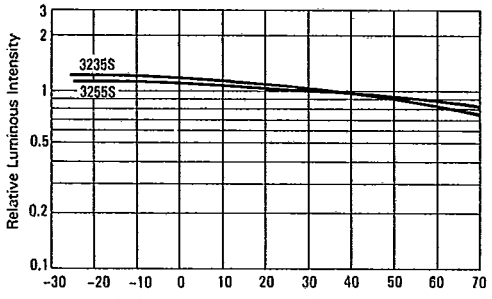

FIG.10 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

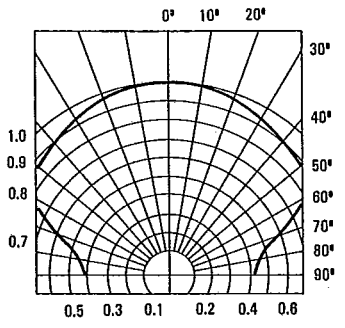

FIG. 11 SPATIAL DISTRIBUTION

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT T_A = 25°C

PARAMETER	SYMBOL	PART NO. LTL–	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	Iv	3295S	0.3	0.8		mcd	I_F = 10 mA Note 1
Viewing Angle	2θ½	3295S		150		deg.	Note 2 (Fig. 16)
Peak Emission Wavelength	λPEAK	3295S		630		nm	Measurement @ Peak (Fig. 1)
Spectral Line Half Width	Δλ	3295S		40		nm	
Forward Voltage	V_F	3295S		2.0	2.8	V	I_F = 20 mA
Reverse Current	I_R	3295S			100	μA	V_R = 5V
Capacitance	C	3295S		20		PF	V_F = 0 f = 1 MHZ

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NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.
2. θ½ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

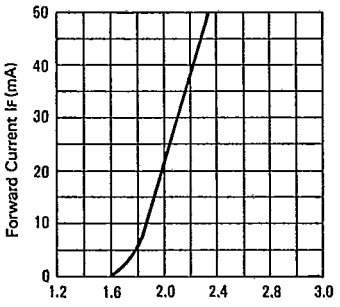

FIG. 12 FORWARD CURRENT VS. FORWARD VOLTAGE

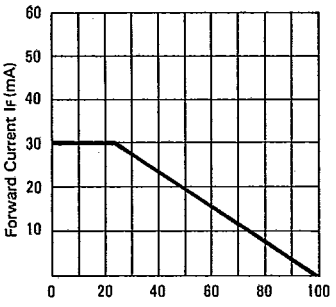

FIG. 13 FORWARD CURRENT DERATING CURVE

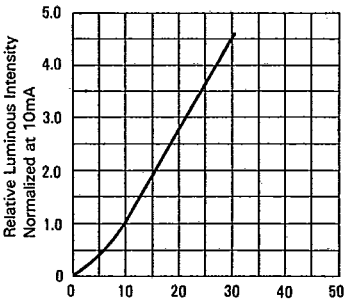

FIG. 14 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

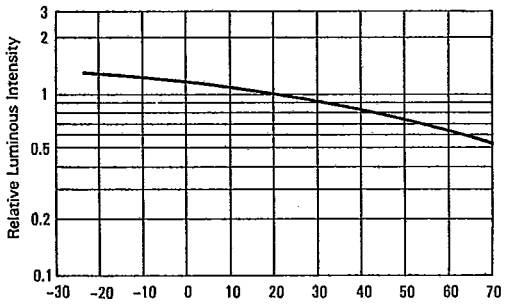

FIG. 15 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

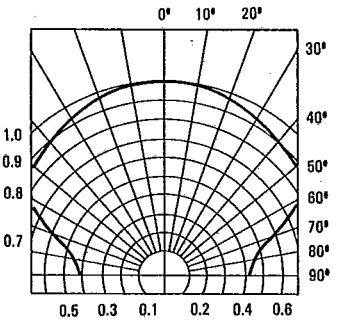

FIG. 16 SPATIAL DISTRIBUTION