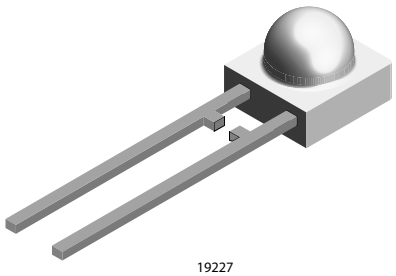
Side View LED, Ø 5 mm Tinted Diffused Package



19227

FEATURES

- Even luminance of the emitting surface
- Wide viewing angle
- Yellow and green color categorized
- For DC and pulse operation
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e4

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm side view
- Product series: standard
- Angle of half intensity: ± 80°

APPLICATIONS

- Indicating and illumination purposes

PARTS TABLE

PART	COLOR	LUMINOUS INTENSITY (mcd)			at I_F (mA)	WAVELENGTH (nm)			at I_F (mA)	FORWARD VOLTAGE (V)			at I_F (mA)	TECHNOLOGY
		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		
TLPR5600	Super red	1	3.5	-	10	-	630	-	10	-	2	3	20	GaAsP on GaP
TLPH5600	Red	0.63	3.5	-	10	612	-	625	10	-	2	3	20	GaAsP on GaP
TLPY5600	Yellow	0.63	2.25	-	10	581	-	594	10	-	2.4	3	20	GaAsP on GaP
TLPG5600	Green	0.63	2.25	-	10	562	-	575	10	-	2.4	3	20	GaP on GaP

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)
TLPR5600, TLPH5600, TLPY5600, TLPG5600

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage			V_R	6	V
DC forward current		TLPR5600	I_F	20	mA
		TLPH5600	I_F	30	mA
		TLPY5600	I_F	30	mA
		TLPG5600	I_F	30	mA
Surge forward current	$t_p \leq 10$ µs		I_{FSM}	1	A
Power dissipation	$T_{amb} \leq 60$ °C	TLPR5600	P_V	60	mW
		TLPH5600	P_V	100	mW
		TLPY5600	P_V	100	mW
		TLPG5600	P_V	100	mW
Junction temperature			T_j	100	°C
Operating temperature range			T_{amb}	-40 to +100	°C
Storage temperature range			T_{stg}	-55 to +100	°C
Soldering temperature	t ≤ 5 s, 2 mm from body		T_{sd}	260	°C
Thermal resistance junction to ambient		TLPR5600	R_{thJA}	500	K/W
		TLPH5600	R_{thJA}	400	K/W
		TLPY5600	R_{thJA}	400	K/W
		TLPG5600	R_{thJA}	400	K/W

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OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)
TLPR5600, SUPER RED

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity (1)	I_F = 10 mA	I_V	1	3.5	-	mcd
Dominant wavelength	I_F = 10 mA	λ_d	-	630	-	nm
Peak wavelength	I_F = 10 mA	λ_p	-	640	-	nm
Angle of half intensity	I_F = 10 mA	φ	-	± 80	-	°
Forward voltage	I_F = 20 mA	V_F	-	2	3	V
Reverse voltage	I_R = 10 µA	V_R	6	15	-	V
Junction capacitance	V_R = 0 V, f = 1 MHz	C_j	-	50	-	pF

Note
(1) In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)
TLPH5600, RED

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity (1)	I_F = 10 mA	I_V	0.63	3.5	-	mcd
Dominant wavelength	I_F = 10 mA	λ_d	612	-	625	nm
Peak wavelength	I_F = 10 mA	λ_p	-	635	-	nm
Angle of half intensity	I_F = 10 mA	φ	-	± 80	-	°
Forward voltage	I_F = 20 mA	V_F	-	2	3	V
Reverse voltage	I_R = 10 µA	V_R	6	15	-	V
Junction capacitance	V_R = 0 V, f = 1 MHz	C_j	-	50	-	pF

Note
(1) In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)
TLPY5600, YELLOW

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity (1)	I_F = 10 mA	I_V	0.63	2.25	-	mcd
Dominant wavelength	I_F = 10 mA	λ_d	581	-	594	nm
Peak wavelength	I_F = 10 mA	λ_p	-	585	-	nm
Angle of half intensity	I_F = 10 mA	φ	-	± 80	-	°
Forward voltage	I_F = 20 mA	V_F	-	2.4	3	V
Reverse voltage	I_R = 10 µA	V_R	6	15	-	V
Junction capacitance	V_R = 0 V, f = 1 MHz	C_j	-	50	-	pF

Note
(1) In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)
TLPG5600, GREEN

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity (1)	I_F = 10 mA	I_V	0.63	2.25	-	mcd
Dominant wavelength	I_F = 10 mA	λ_d	562	-	575	nm
Peak wavelength	I_F = 10 mA	λ_p	-	565	-	nm
Angle of half intensity	I_F = 10 mA	φ	-	± 80	-	°
Forward voltage	I_F = 20 mA	V_F	-	2.4	3	V
Reverse voltage	I_R = 10 µA	V_R	6	15	-	V
Junction capacitance	V_R = 0 V, f = 1 MHz	C_j	-	50	-	pF

Note
(1) In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

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LUMINOUS INTENSITY CLASSIFICATION		
GROUP	LIGHT INTENSITY (mcd)	
STANDARD	MIN.	MAX.
K	0.63	1.25
L	1	2
M	1.6	3.2
N	2.5	5
P	4	8
Q	6.3	12.5
R	10	20
S	16	32
T	25	50
U	40	80

Note

- Luminous intensity is tested at a current pulse duration of 25 ms. These type numbers represent the order groups which include only a few brightness groups. Only one group will be shipped on each bag (there will be no mixing of two groups on each bag). In order to ensure availability, single brightness groups will not be orderable.
  In a similar manner for colors where wavelength groups are measured and binned, single wavelength groups will be shipped on any one bag.
  In order to ensure availability, single wavelength groups will not be orderable

COLOR CLASSIFICATION				
GROUP	DOM. WAVELENGTH (nm)			
	YELLOW		GREEN	
	MIN.	MAX.	MIN.	MAX.
1	581	584	-	-
2	583	586	-	-
3	585	588	562	565
4	587	590	564	567
5	589	592	566	569
6	591	594	568	571
7	-	-	570	573
8	-	-	572	575

Note

- Wavelengths are tested at a current pulse duration of 25 ms

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

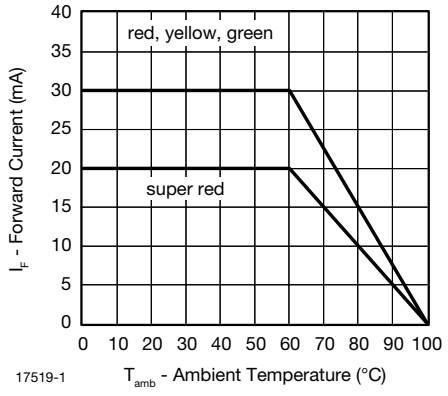


Fig. 1 - Forward Current vs. Ambient Temperature

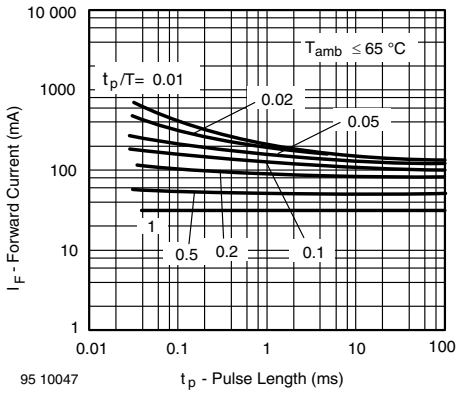


Fig. 2 - Forward Current vs. Pulse Length

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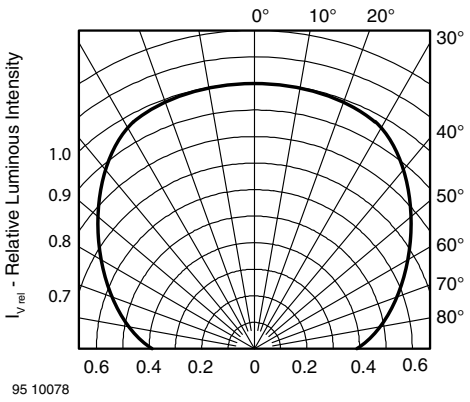


Fig. 3 - Relative Luminous Intensity vs. Angular Displacement

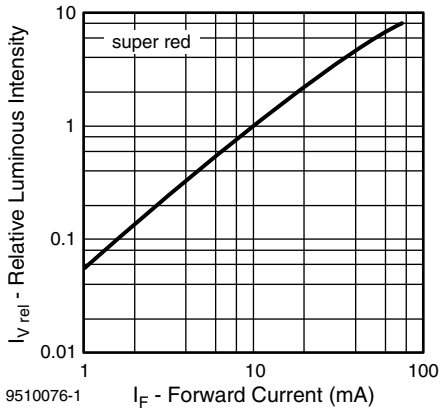


Fig. 6 - Relative Luminous Intensity vs. Forward Current

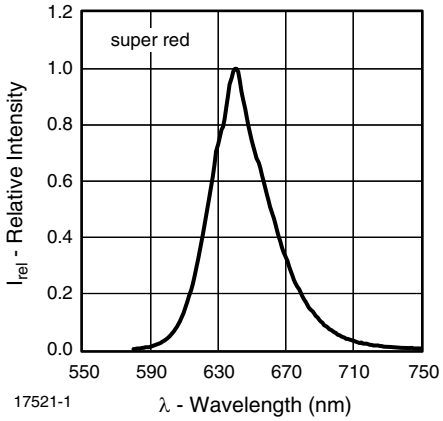


Fig. 4 - Relative Intensity vs. Wavelength

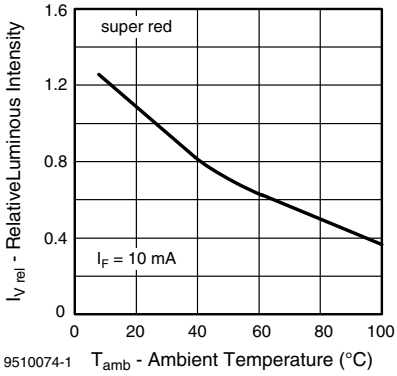


Fig. 7 - Relative Luminous Intensity vs. Ambient Temperature

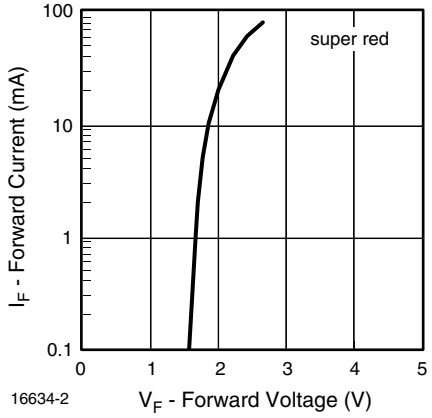


Fig. 5 - Forward Current vs. Forward Voltage

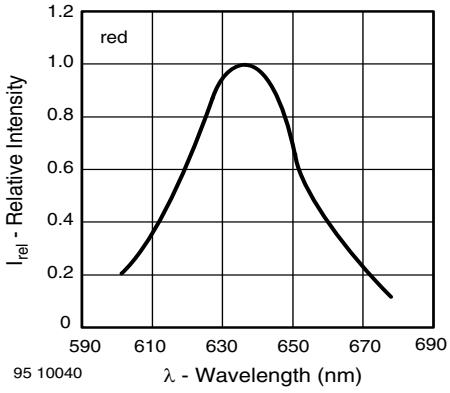


Fig. 8 - Relative Intensity vs. Wavelength

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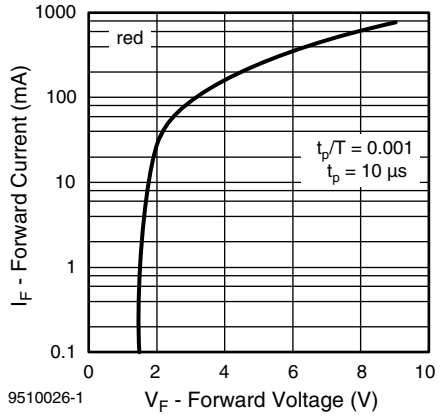


Fig. 9 - Forward Current vs. Forward Voltage

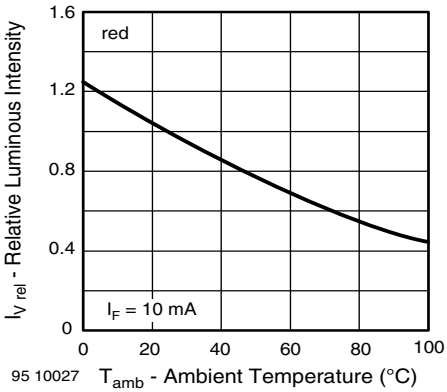


Fig. 12 - Relative Luminous Intensity vs. Ambient Temperature

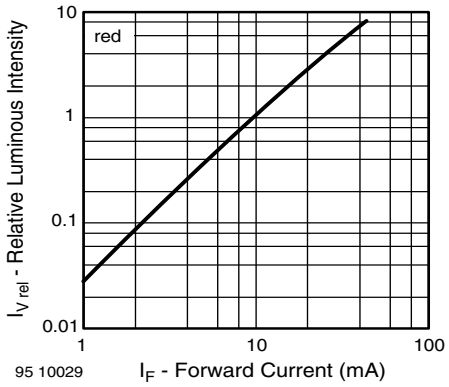


Fig. 10 - Relative Luminous Intensity vs. Forward Current

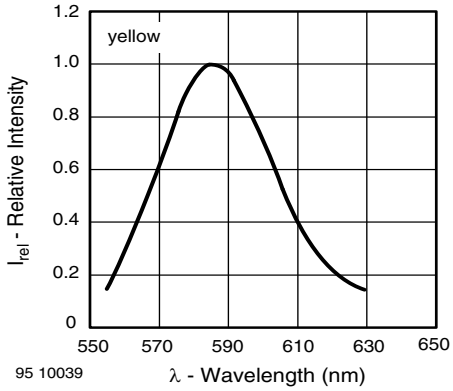


Fig. 13 - Relative Intensity vs. Wavelength

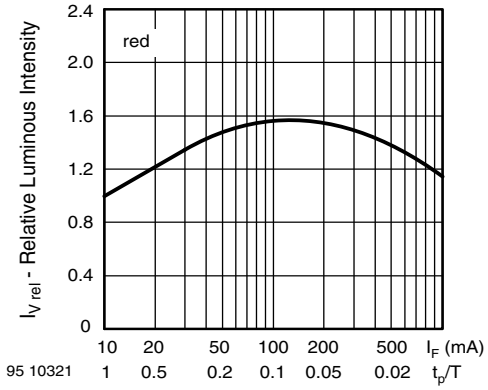


Fig. 11 - Relative Luminous Intensity vs. Forward Current / Duty Cycle

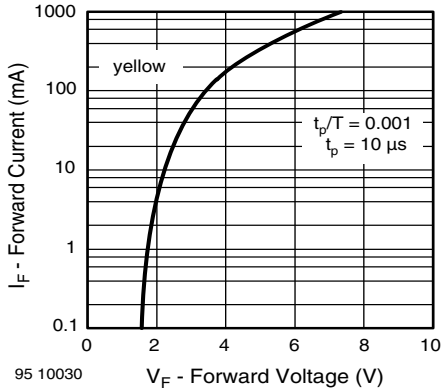


Fig. 14 - Forward Current vs. Forward Voltage

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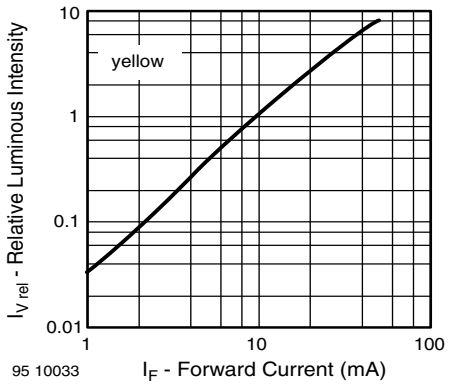


Fig. 15 - Relative Luminous Intensity vs. Forward Current

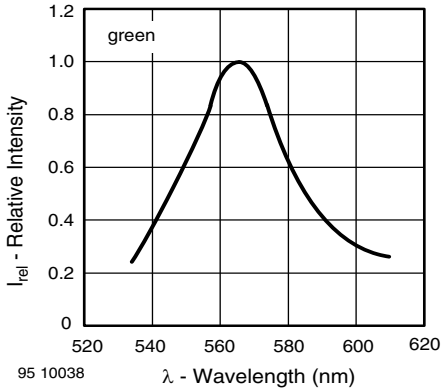


Fig. 18 - Relative Intensity vs. Wavelength

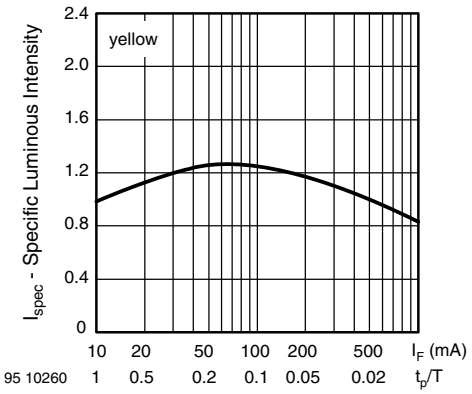


Fig. 16 - Relative Luminous Intensity vs.
Forward Current / Duty Cycle

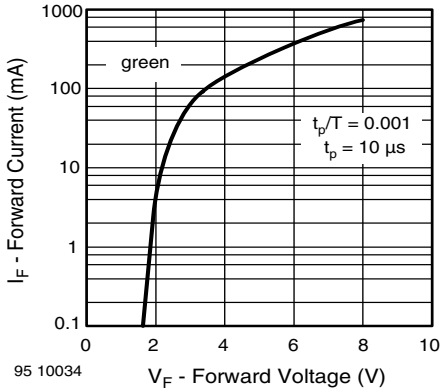


Fig. 19 - Forward Current vs. Forward Voltage

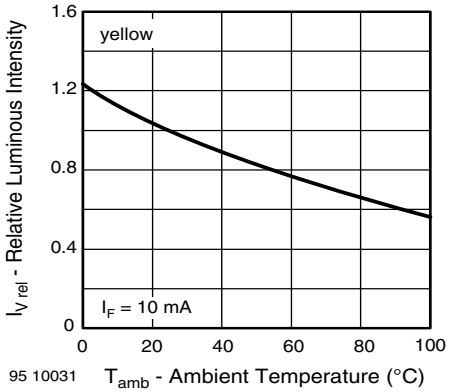


Fig. 17 - Relative Luminous Intensity vs. Ambient Temperature

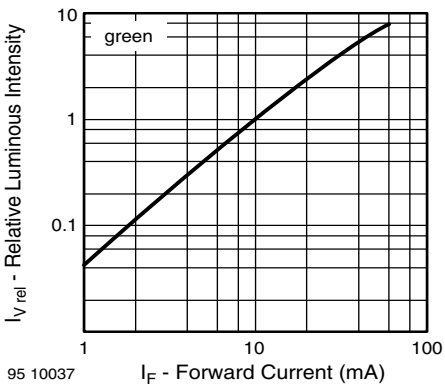


Fig. 20 - Relative Luminous Intensity vs. Forward Current

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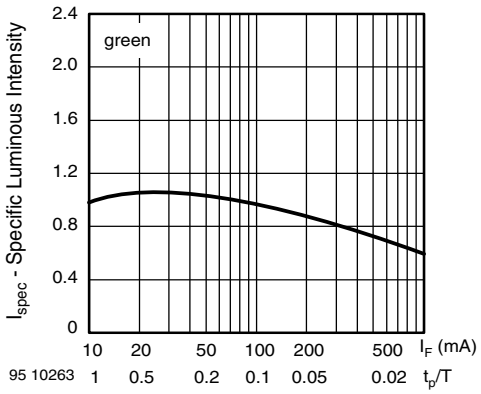


Fig. 21 - Specific Luminous Intensity vs. Forward Current

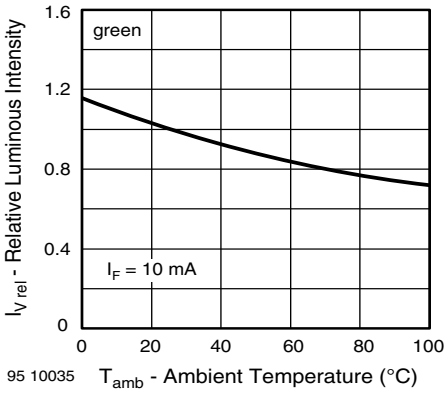
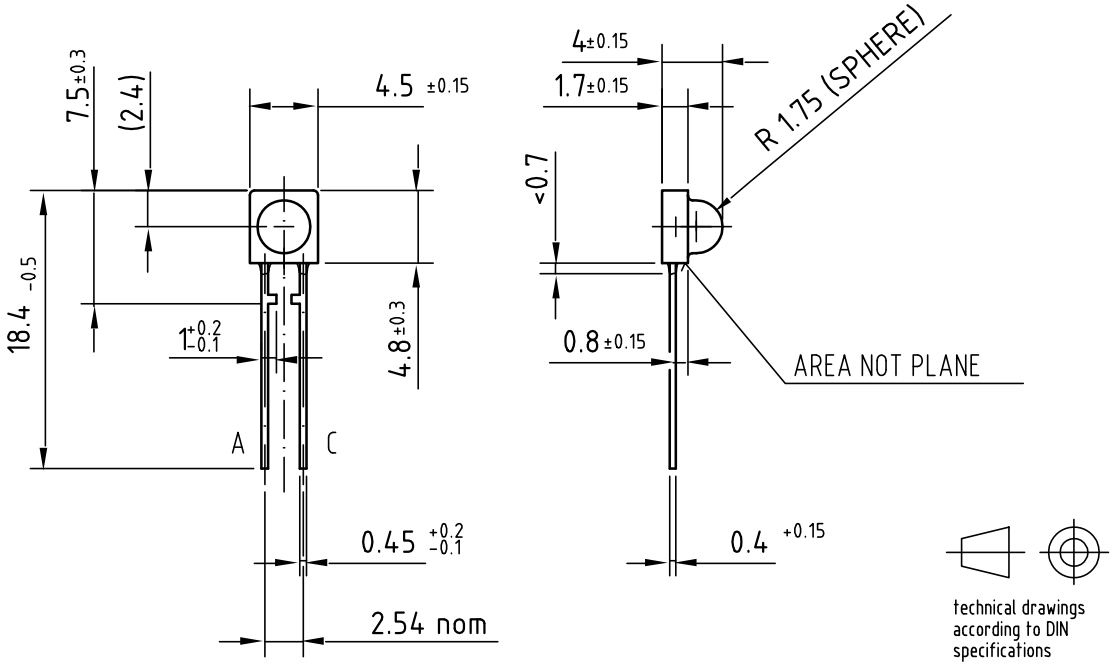


Fig. 22 - Relative Luminous Intensity vs. Ambient Temperature

PACKAGE DIMENSIONS in millimeters

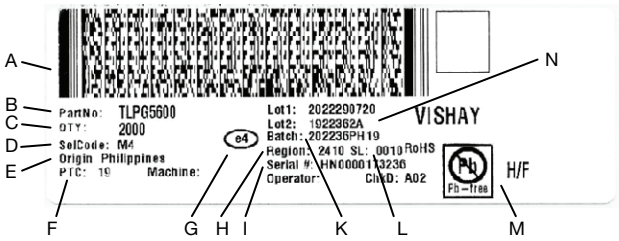


Drawing-No.: 6.544-5127.01-4
Issue: 1; 15.11.95
95 11321

PACKING INFORMATION	
PART	**BULK**
TLPx5600	2000

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BAR CODE PRODUCT LABEL (example)



A. 2D barcode
B. Part No: Vishay part number
C. QTY: quantity
D. SelCode: selection bin code
E. Country of origin
F. PTC: production plant code
G. Termination finish
H. Region code
I. Serial#: serial number
J. Batch number: year, week, country code, plant code
K. SL: storage location
L. Environmental symbols: RoHS, lead (Pb)-free, halogen-free
M. Lot numbers

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