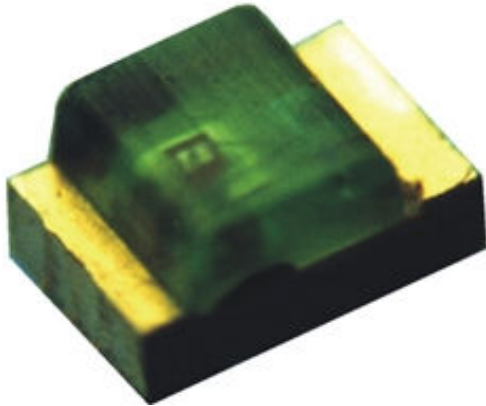


EUROLED

Surface Mount LED

EM20 Series / EM20 tape
2,0 x 1,25 - mm



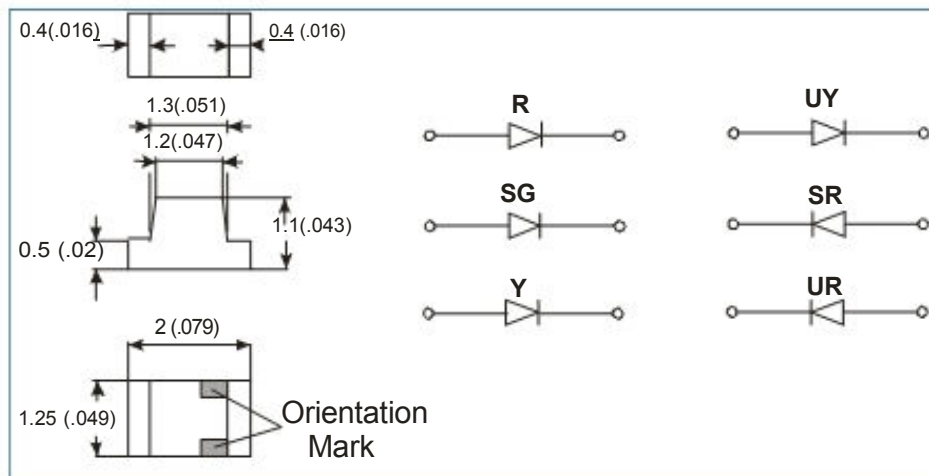
Description:

The EM 20 series is available in various colours.

All devices are ideal for back light applications. They provide a superior light uniformity.

Features and Benefits

- ▶ Surface mounting device
- ▶ 2.0 mm x 1.25 mm SMT LED, 1.1 mm thickness
- ▶ Low power consumption
- ▶ Wide viewing angle
- ▶ RoHS compliant



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is +0.25 (0.01) unless otherwise noted.
3. Specifications are subjected to change without notice.

PART NO	Source (Dice)	Lens Type (Resin)	Luminous Intensity MCD @ 20 mA		Viewing Angle
			Min.	Max.	
EM 20R	Red High Efficiency (GaAsP/GaP)	Red Trans	4	12.5	120°
EM 20SG	Green Super Bright (GaP)	Green Trans	4	12.5	120°
EM 20Y	Yellow (GaAsP/GaP)	Yellow Trans	5	12.5	120°
EM 20SR	Red Super Bright (GaAlAs)	Red Trans	40	70	120°
EM 20UR	Red Ultra Bright (GaAlAs)	Red Trans	40	70	120°
EM 20UY	Yellow Ultra Bright (InGaAlP)	Yellow Trans	50	80	120°
EM 20A	Pure Orange (GaAsP/GaP)	Orange Trans.	4	10	120°

Note: according IEC 60825-1 (EN60825):

LED Radiation

Do not view directly with optical instruments.

Technical Data

Absolute maximum ratings (TA = 25° C)		SG Standard Green (GaP)	R Hi.Eff. Red (GaAs/GaP)	Y Yellow (GaAsP/GaP)	UY Super Bright Yellow (InGaAlP)	SR - UR Super Bright Red (GaAlAs)	A Pure Orange (GaAsP/GaP)	Unit
Reverse voltage	V _R	5	5	5	5	5	5	V
Forward current	I _F	25	30	30	30	30	25	mA
Forward current (Peak) 1 / 10 Duty Cycle, 0.1 ms Pulse Width	i _{FS}	150	150	150	150	150	145	mA
Power dissipation	P _T	105	105	105	125	100	105	mW
Operating temperature	T _A	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	°C
Storage temperature	T _{STG}	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	°C

Operating characteristics (TA = 25° C)		SG Standard Green (GaP)	R Hi.Eff. Red (GaAs/GaP)	Y Yellow (GaAsP/GaP)	UY Super Bright Yellow (InGaAlP)	SR - UR Super Bright Red (GaAlAs)	A Pure Orange (GaAsP/GaP)	Unit
Forward voltage (typ.) I _F = 20 mA	V _F	2.2	2.0	2.1	2.0	1.85	2.05	
Forward voltage (max.) I _F = 20 mA	V _F	2.5	2.5	2.5	2.5	2.5	2.5	
Reverse current V _R = 20 mA	I _R	10	10	10	10	10	10	
Wavelength at peak emission I _F = 20 mA	λ _P	565	625	590	590	660	607	
Spectral line half-width I _F = 20 mA	λ	30	45	35	28	20	35	
Capacitance V _F = 0 V, f = 1 MHz	C	45	12	10	25	95	15	

Figure 1

Solder pad recommendation for the following techniques:

- convection reflow soldering
- wave soldering
- vapor phase soldering

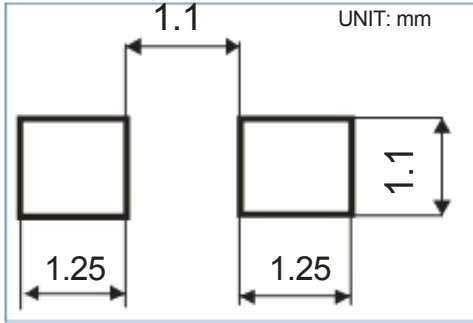
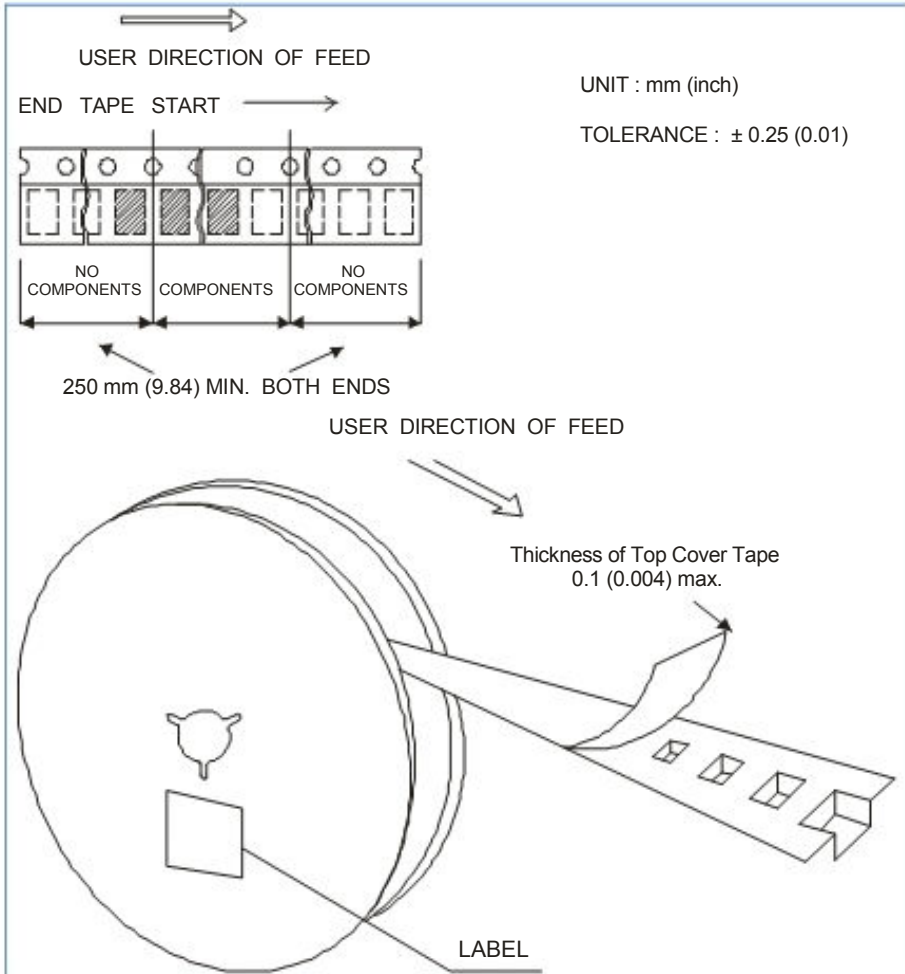


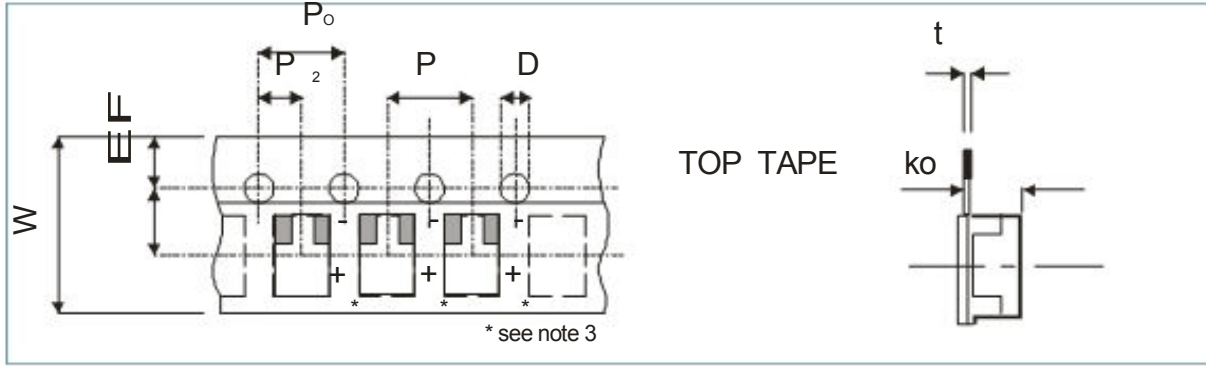
Figure 2



NOTES:

1. Empty component pockets sealed with top cover tape.
2. 7 Inch reel (178 mm) - 2000 pieces per reel.
3. The cathode is orientated towards the tape sprocket hole (except SR and UR).
4. The maximum number of consecutive missing lamps is two.
5. Minimum leader length at either end of the tape is 250 mm.

Figure 3



Dimensions per millimeter (inches)

D	1.55 ± 0.1 (0.061) DIA
E	1.75 ± 0.1 (0.069)
F	3.5 (0.14 ± 0.002)
ko	1.32 (0.052) TYP.
P	4.0 (0.157) TYP.
P ₀	4.0 (0.157) TYP.
P ₂	2.0 (0.079 ± 0.02) TYP.
t	0.23 (0.009) TYP.
W	8.0 ± 0.3 (0.315 ± 0.012)

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