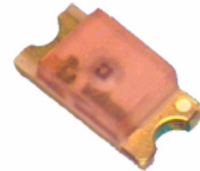


Series 156 - 1206 low current

red 650 nm

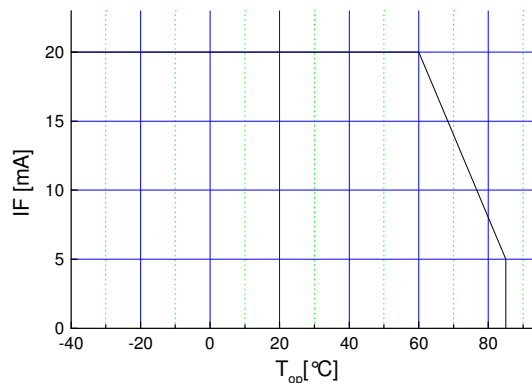
Features

- size 1206: 3,2(L) x 1,6(W) x 1,2(H) mm
- low current
- circuit substrate: glass laminated epoxy
- devices are ROHS conform
- lead free solderable, soldering pads: gold plated
- taped in 8 mm blister tape, cathode to transporting perforation
- all devices sorted into luminous intensity classes
- taping: face-up (T) or face-down (TD) possible
- high luminous intensity types



Absolute Maximum Ratings

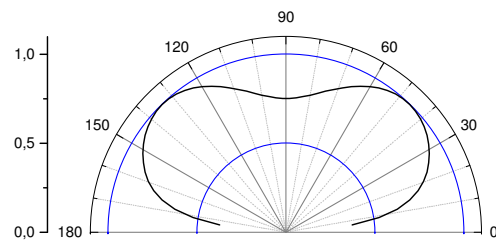
| $I_{F, max}$ [mA] | $I_{F, P}$ [mA] $t_p \leq 100 \mu s$ $\tau=1: 10$ | V_R [V] | I_R, max [μA] | Thermal resistance R_{thJA} [K / W] | T_{Op} [$^{\circ}C$] | T_{St} [$^{\circ}C$] |
|-------------------|--|-----------|------------------------|--|--------------------------|--------------------------|
| 20 | 50 | 5 | 100 | 450 | -40...85 | -55...85 |



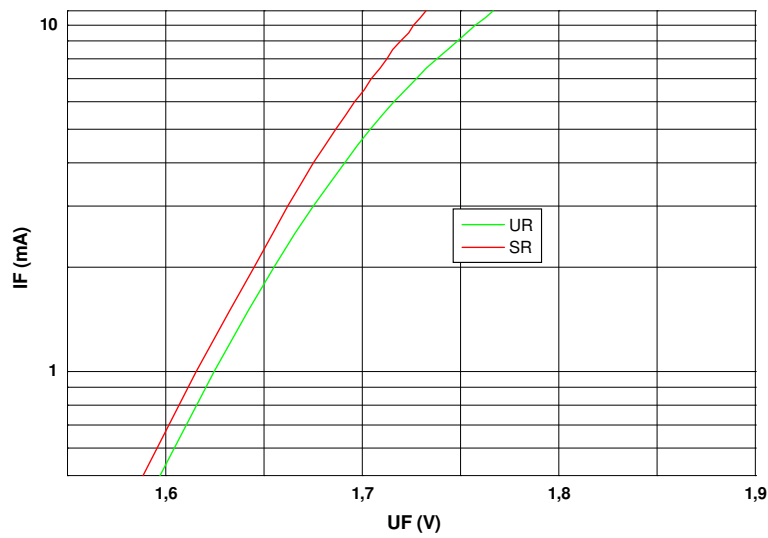
Maximal
forward
current (DC)
characteristic

Electro-Optical Characteristics

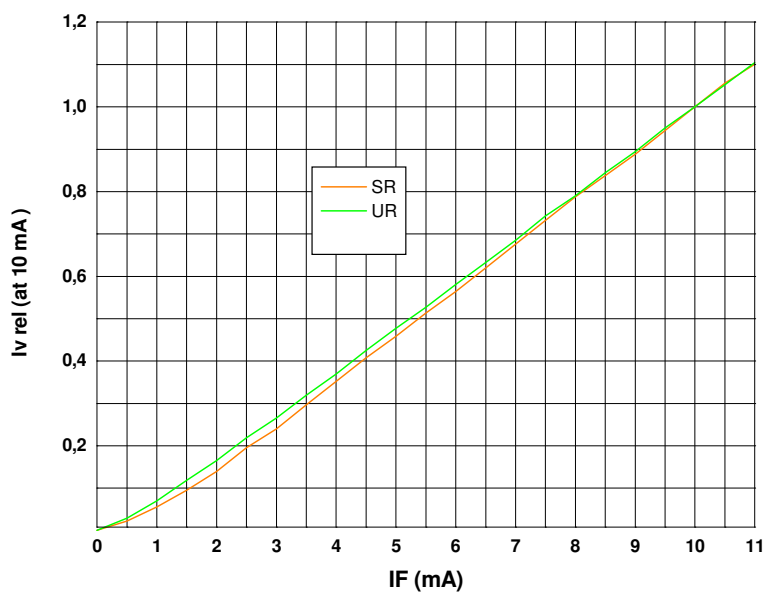
| Type | Emitting color | Marking at | Measurement I_F [mA] | V_F [V] | | λ_d / λ_p^* [nm] | I_v [mcd] | |
|------------|----------------|------------|------------------------|-----------|-----|--------------------------------|-------------|-----|
| | | | | typ | max | | min | typ |
| OLS-156 UR | red | anode | 2 | 1,8 | 2,6 | 650 * | 1.5 | 3.5 |
| OLS-156 SR | red | anode | 2 | 1,8 | 2,6 | 655 * | 0.8 | 2.0 |



view angle

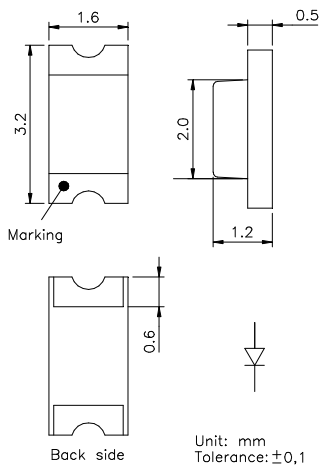


$U_F - I_F$
characteristic

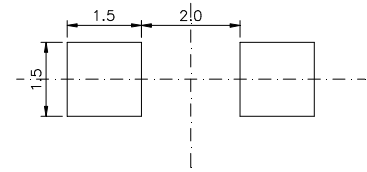


$I_F - I_{v, rel}$
characteristic

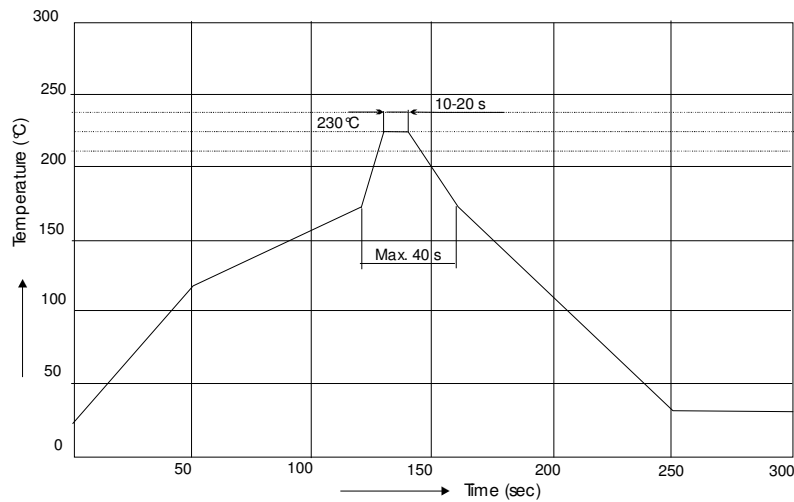
Outline Drawing



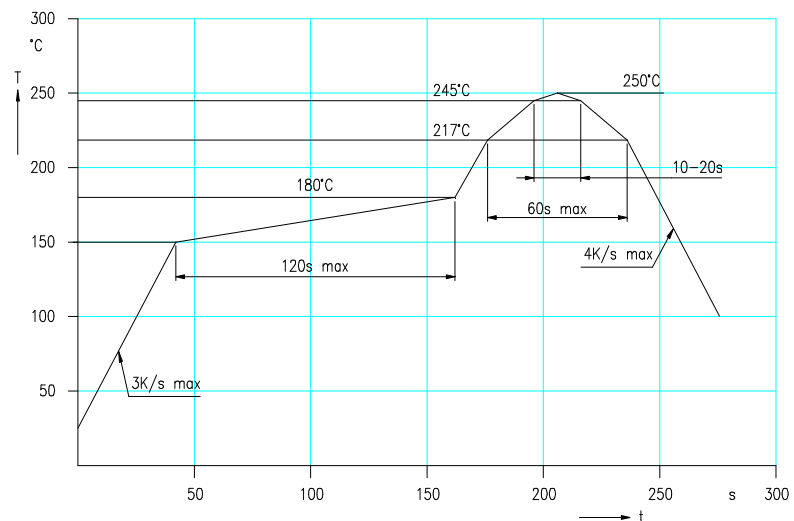
Recommended Soldering Patterns



Soldering Conditions



IR reflow soldering profile



IR reflow soldering profile for lead free soldering

Manual soldering: max power of iron 25W/ 3s/ 300°C

Ordering Code For Parts

| Series | Color | Encapsulation | Packaging |
|---------|---------|---|---------------------------------|
| OLS-156 | ??????? | ? | ? |
| | | | T - taped up TD - taped down |
| | | CD - colored diffused (standard) XD - uncolored diffused C - colored clear X - uncolored clear | |

Type definition, e.g. OLS-156 UR-CD-T

LED Luminous Intensity Groups And Subgroups [mcd]

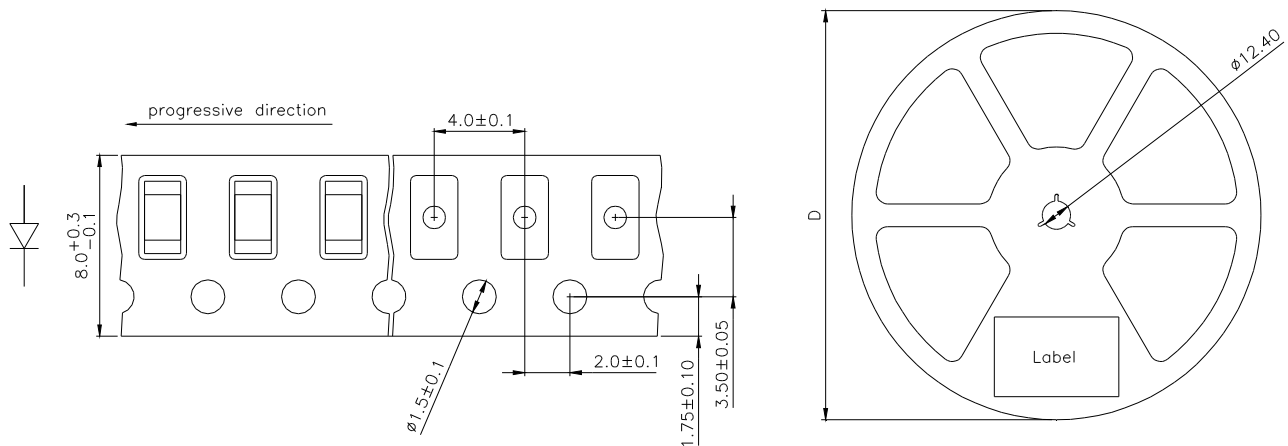
(general information – not this device specific)

| | | | | | | | | | | | |
|----|-------|---|-------|-----|-------|---|-------|-----|------|---|------|
| C: | 0.28 | - | 0.45 | C1: | 0.28 | - | 0.36 | Q1: | 71 | - | 90 |
| D: | 0.45 | - | 0.71 | C2: | 0.36 | - | 0.45 | Q2: | 90 | - | 112 |
| E: | 0.71 | - | 1.12 | D1: | 0.45 | - | 0.56 | R1: | 112 | - | 140 |
| F: | 1.12 | - | 1.80 | D2: | 0.56 | - | 0.71 | R2: | 140 | - | 180 |
| G: | 1.80 | - | 2.80 | E1: | 0.71 | - | 0.90 | S1: | 180 | - | 224 |
| H: | 2.80 | - | 4.50 | E2: | 0.90 | - | 1.12 | S2: | 224 | - | 280 |
| J: | 4.50 | - | 7.10 | F1: | 1.12 | - | 1.40 | T1: | 280 | - | 355 |
| K: | 7.10 | - | 11.20 | F2: | 1.40 | - | 1.80 | T2: | 355 | - | 450 |
| L: | 11.20 | - | 18.00 | G1: | 1.80 | - | 2.24 | U1: | 450 | - | 560 |
| | | | | G2: | 2.24 | - | 2.80 | U2: | 560 | - | 710 |
| M: | 18 | - | 28 | H1: | 2.80 | - | 3.55 | V1: | 710 | - | 900 |
| N: | 28 | - | 45 | H2: | 3.55 | - | 4.50 | V2: | 900 | - | 1120 |
| P: | 45 | - | 71 | J1: | 4.50 | - | 5.60 | W1: | 1120 | - | 1420 |
| Q: | 71 | - | 112 | J2: | 5.60 | - | 7.10 | W2: | 1420 | - | 1800 |
| R: | 112 | - | 180 | K1: | 7.10 | - | 9.00 | X1: | 1800 | - | 2250 |
| S: | 180 | - | 280 | K2: | 9.00 | - | 11.20 | X2: | 2250 | - | 2800 |
| T: | 280 | - | 450 | L1: | 11.20 | - | 14.00 | Y1: | 2800 | - | 3550 |
| U: | 450 | - | 710 | L2: | 14.00 | - | 18.00 | Y2: | 3550 | - | 4500 |
| V: | 710 | - | 1120 | M1: | 18.00 | - | 22.40 | Z1: | 4500 | - | 5750 |
| W: | 1120 | - | 1800 | M2: | 22.40 | - | 28.00 | Z2: | 5750 | - | 7100 |
| X: | 1800 | - | 2800 | N1: | 28.00 | - | 35.50 | | | | |
| Y: | 2800 | - | 4500 | N2: | 35.50 | - | 45.00 | | | | |
| Z: | 4500 | - | 7100 | P1: | 45.00 | - | 56.00 | | | | |
| | | | | P2: | 56.00 | - | 71.00 | | | | |

Measured according to CIE 127. All SMD-LEDs are 100% measured and selected on full automated equipment with an accuracy of $\pm 11\%$.

**Special service: Brightness selection in sub selections possible.
Color selection in 3 sub selections possible (each subgroup per reel).**

Tape And Reel Packing



| D | Parts/reel |
|--------|------------|
| 180 mm | 3000 |
| 330 mm | 12000 |

Packing: The reel is sealed in special plastic bag with integrate ESD protection (MIL - STD 81705) including a silica dry-pack

Label

| | | |
|-----------------|--------------------|---|
| Order No. | XXXXXXXXXX | Customer order No. |
| Type | OLS-156 ?????-??-T | |
| Intensity group | ZZ | Color class: CC |
| Charge No. | 1122-AAAAAA | 11 Week – 22 year – A internal identification |
| Quantity | 9999 | |

Attention please:

The information describes the type of component and shall not considered as assured characteristics. Terms of delivery and rights to change reserved.

Due to technical requirements components may contain dangerous substances.

The data sheet may changed without prior information; the valid issue will be on our webpage in internet.

Packaging:

Please use the recycling operators known to you.

Components used in life support devices or systems and safety systems must be expressly authorized for such purpose!