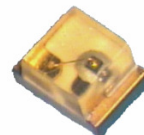


## Series 170 - 0805 Standard

### High luminous intensity

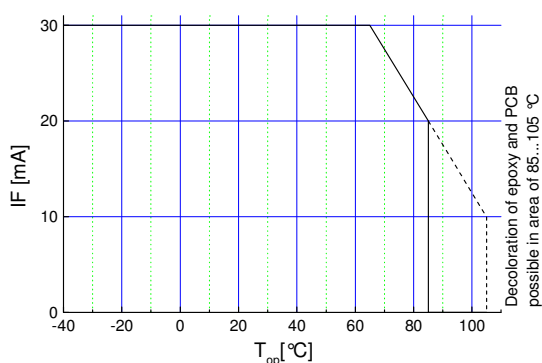
#### Features

- size 0805: 1,9(L) x 1,2(W) x 1,2(H) mm
- 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
- high luminous intensity types
- on request sorted in color classes



#### Absolute Maximum Ratings

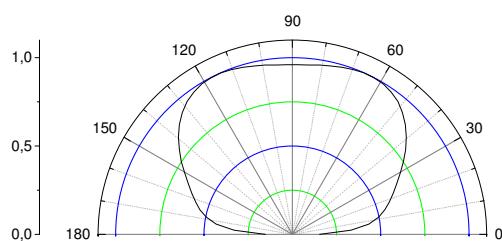
| $I_{F, max}$ [mA] | $I_{F, P}$ [mA] $t_p \leq 100 \mu s$ $\tau=1:10$ | $V_R$ [V] | $I_{R, max}$ [ $\mu A$ ] | Thermal resistance $R_{thJA}$ [K / W] | $T_{Op}$ [ $^{\circ}C$ ] | $T_{St}$ [ $^{\circ}C$ ] |
|-------------------|--------------------------------------------------|-----------|--------------------------|---------------------------------------|--------------------------|--------------------------|
| 30                | 100                                              | 5         | 100                      | 500                                   | -40...105                | -55...105                |



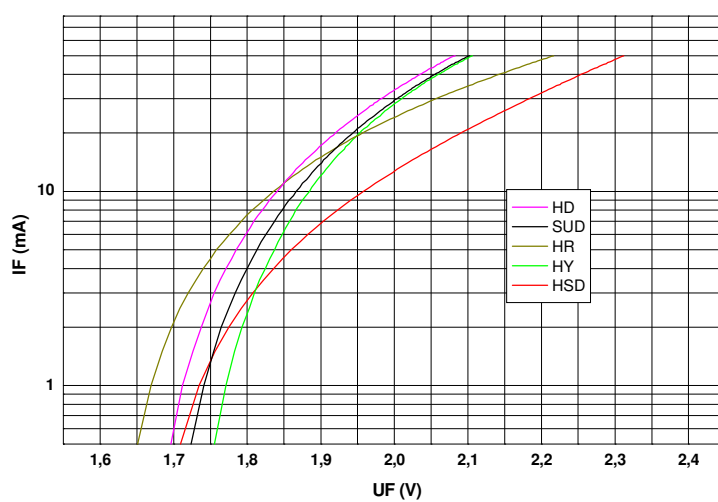
Maximal  
forward  
current (DC)  
characteristic

#### Electro-Optical Characteristics

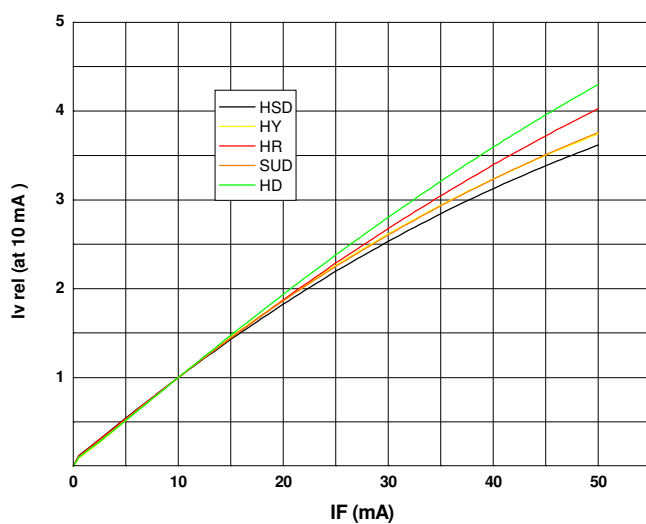
| Type        | Emitting color | Marking at | Measurement $I_F$ [mA] | $V_F$ [V] |     | $\lambda_d / \lambda_p^*$ [nm] | $I_v$ [mcd] |     |
|-------------|----------------|------------|------------------------|-----------|-----|--------------------------------|-------------|-----|
|             |                |            |                        | typ       | max |                                | min         | typ |
| OLS-170 HY  | hyper yellow   | cathode    | 20                     | 2,0       | 2,6 | 590                            | 60          | 150 |
| OLS-170 SUD | super orange   | cathode    | 20                     | 2,0       | 2,6 | 605                            | 60          | 130 |
| OLS-170 HD  | hyper orange   | cathode    | 20                     | 2,0       | 2,6 | 615                            | 60          | 150 |
| OLS-170 HSD | hyper TSN red  | cathode    | 20                     | 2,1       | 2,6 | 625                            | 60          | 120 |
| OLS-170 HR  | hyper red      | cathode    | 20                     | 2,0       | 2,6 | 632                            | 40          | 85  |



view angle

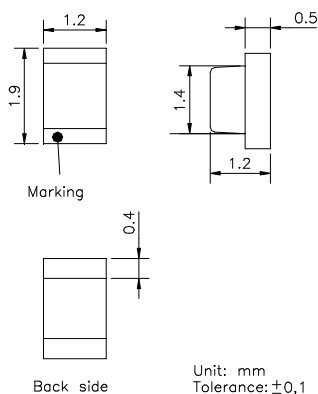


$U_F - I_F$   
characteristic

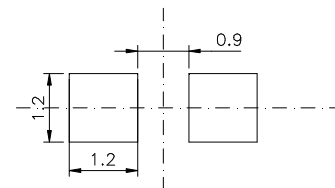


$I_F - I_{v,rel}$   
characteristic

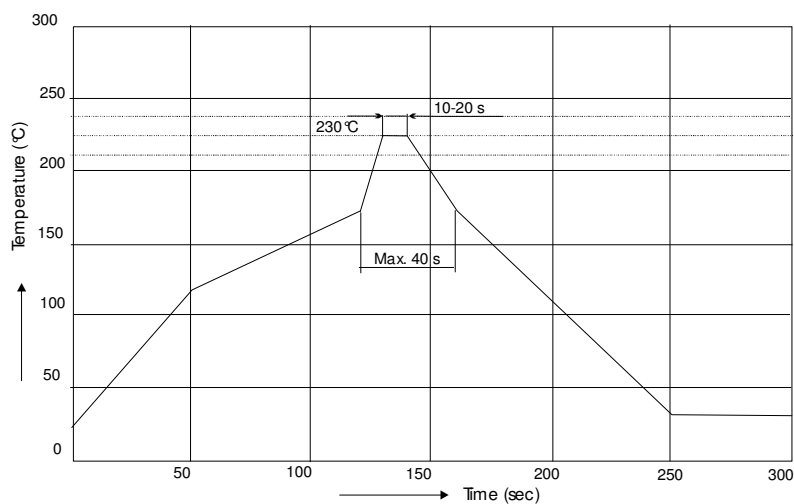
## Outline Drawing



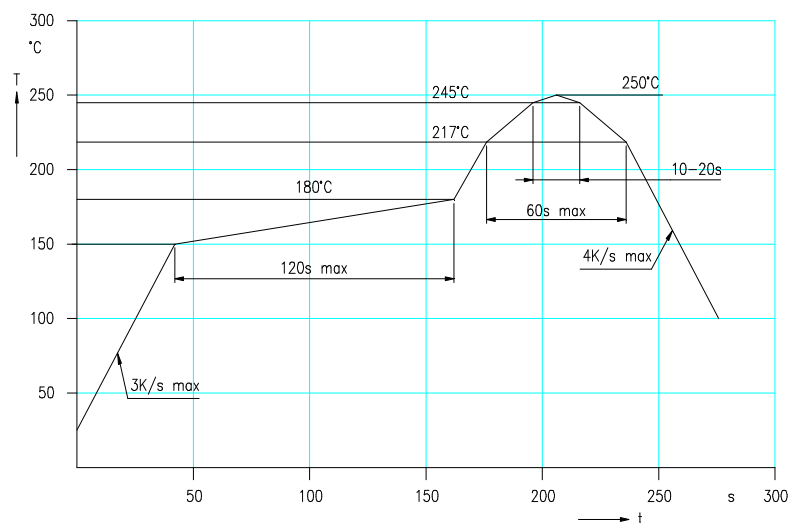
## Recommended Soldering Patterns



## 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-170 | ??????? | ?                                                                                                                                                             | T         |
|         |         |                                                                                                                                                               | T - taped |
|         |         | C - colored (standard) possible for red, green, blue<br>XD - uncolored diffused<br>CD - colored diffused possible for red, green, blue<br>X - uncolored clear |           |

Type definition, e.g. OLS-170 HY-X -T

## LED Luminous Intensity Groups And Subgroups [ mcd ]

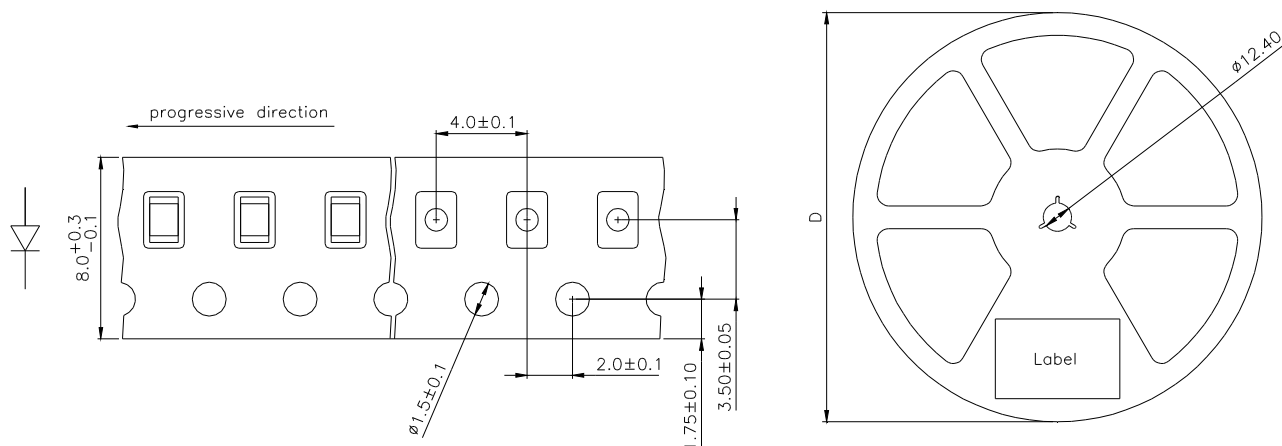
(general information – not this device specific)

|    |               |     |               |     |             |
|----|---------------|-----|---------------|-----|-------------|
| 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-170 ?????-??-T |                                               |
| Intensity group | ZZ                 | Color class: CC                               |
| Charge No.      | 1122-AAAAAA        | Color class - optional                        |
| Quantity        | 9999               | 11 Week – 22 year – A internal identification |

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!