

**DISPLAY Elektronik GmbH**

**DATA SHEET**

**BACKLIGHT**

**DE LP-507-RGB**

*Product Specification*

*Version: 1*

17.11.2016

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# GENERAL SPECIFICATION

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MODEL NO. :

**DE LP-507-RGB**

CUSTOMER P/N

| Version No. | Change Description         | Date       |
|-------------|----------------------------|------------|
| 0           | Original Version           | 12.10.2016 |
| 1           | Change Dominant Wavelength | 17.11.2016 |
|             |                            |            |
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PREPARED BY: ZX

DATE: 17.11.2016

APPROVED BY: MH

DATE: 17.11.2016

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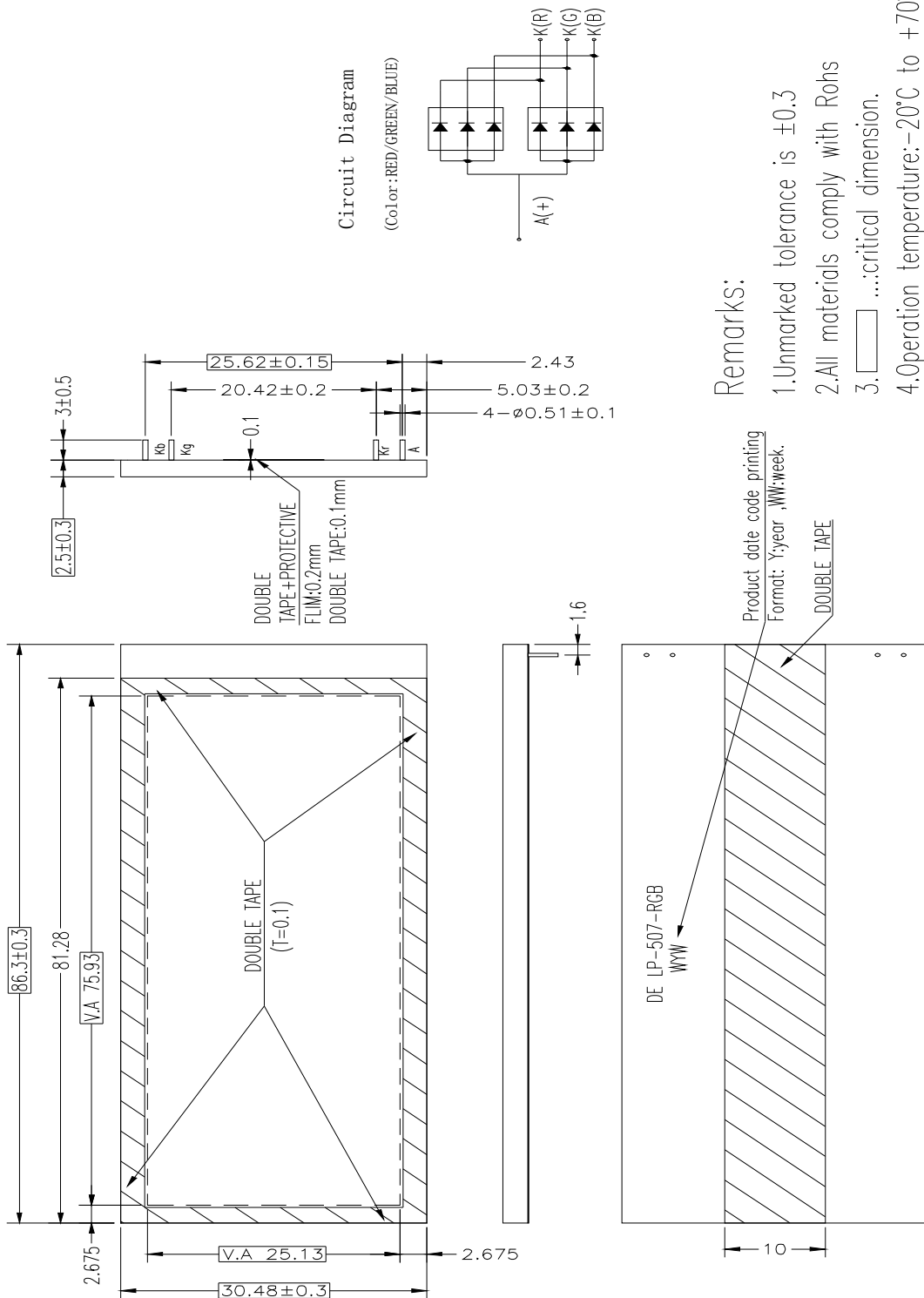
**5. RELIABILITY TEST..... FEHLER! TEXTMARKE NICHT DEFINIERT.**

## 1. FEATURES

Backlight Color: RGB

RoHS: Conformed

## 2. EXTERNAL DIMENSION (unit: mm)



### Remarks:

1. Unmarked tolerance is  $\pm 0.3$
2. All materials comply with Rohs
3.  ...critical dimension.
4. Operation temperature:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$

**3. ELECTRICAL/OPTICAL SPECIFICATIONS**

Electronics/Optical Specifications:

Ta=25°C. Unless specified, The Ambient temperature Ta=25°C

| Item                      | Symbol      | RED                           |      |      | GREEN |      |      | BLUE |      |      | Unit              | Condition  |
|---------------------------|-------------|-------------------------------|------|------|-------|------|------|------|------|------|-------------------|------------|
|                           |             | MIN.                          | TYP. | MAX. | MIN.  | TYP. | MAX. | MIN. | TYP. | MAX. |                   |            |
| Forward Voltage           | Vf          | 1.9                           | 2.1  | 2.5  | 2.8   | 3.0  | 3.4  | 2.9  | 3.1  | 3.5  | V                 | If=20*2 mA |
| Dominant Wave Length      | $\lambda_D$ | 620                           | 625  | 630  | 515   | 520  | 525  | 465  | 470  | 475  | nm                |            |
| Color Chromaticity        | X           | —                             | —    | —    | —     | —    | —    | —    | —    | —    |                   |            |
|                           | Y           | —                             | —    | —    | —     | —    | —    | —    | —    | —    |                   |            |
| Uniformity                | Avg         | 65                            |      |      | 65    |      |      | 65   |      |      | %                 |            |
| Luminance                 | Lv          | 80                            | 200  |      | 150   | 350  |      | 40   | 100  |      | cd/m <sup>2</sup> |            |
| Reverse Current (Per LED) | Ir          |                               |      | 10   |       |      | 10   |      |      | 10   | $\mu$ A           | Vr= 5.0 V  |
| Lifetime                  |             | 50000(brightness reduce half) |      |      |       |      |      |      |      |      | Hours             |            |

**4. ACCEPT QUALITY LEVEL (AQL).**

4.1. AQL standard value: Critical defect =0, Major defect=0.65; Minor defect =2.5.

4.2. Inspection Plan: ANSI Z-1.4, Normal Inspection Level II, Single Sampling Plan.

**5. RELIABILITY TEST**

| Test Item                       | Test Condition   |
|---------------------------------|--|
| High Temperature Storage        | +90°C x 96h  |
| Low temperature Storage         | -40°C x 96h  |
| High Temperature Operation      | +70°C x 96h  |
| Low Temperature Operation       | -20°C x 96h  |
| High Temperature, High Humidity | 60°C x 90%RH x 4 Weeks                                   |
| Thermal Shock                   | -20°C x 30min → 25°C x 10s → +70°C x 30min<br>x 5 Cycles |
| Vibration Test                  | Frequency x Swing x Time<br>40Hz x 4mm x 4h              |
| Drop Test                       | Height x Number of drop<br>1.0m x 6 drops                |