We reserve the right to make changes to improve technical design and may do so without further notice.
Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

**Jumbo®-LED**  
Lead (Pb) free Product - RoHS Compliant  
ELJ-520-628-2  
Prototype  
19.06.2015 rev. 01

### Radiation

<table>
<thead>
<tr>
<th>Radiation</th>
<th>Type</th>
<th>Case</th>
<th>Lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>green</td>
<td>3.7 W</td>
<td>Aluminium</td>
<td>Plastic</td>
</tr>
</tbody>
</table>

### Description

High-power green LED in an aluminium case with thread socket, for easy handling and heat sink mounting. Applications demanding long lifetimes are perfectly addressed with this highly reliable LED. LED is protected by ESD device which is connected in parallel to LED-Chip. LED is well protected against rough ambient conditions therefore this LED is perfectly suited for outdoor use.

### Applications

- Industrial lighting, outdoor/indoor lighting,  
- miniatur spot light, architectural lighting, shop lighting,  
- stage lighting

### Absolute Maximum Ratings

at $T_{\text{amb}} = 25°C$, on heat sink ($S \geq 200 \, \text{cm}^2$), unless otherwise specified

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remarks</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC forward current</td>
<td>on heat sink</td>
<td>$I_F$</td>
<td>1.0</td>
<td>A</td>
</tr>
<tr>
<td>Power dissipation</td>
<td>on heat sink</td>
<td>$P$</td>
<td>4.0</td>
<td>W</td>
</tr>
<tr>
<td>Surge current</td>
<td>on heat sink</td>
<td>$I_{FM}$</td>
<td>2.0</td>
<td>A</td>
</tr>
<tr>
<td>Reverse current $^3$</td>
<td>not designed for reverse operation</td>
<td>$I_R$</td>
<td>---</td>
<td>mA</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>on heat sink</td>
<td>$T_{\text{amb}}$</td>
<td>-25 to +85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>on heat sink</td>
<td>$T_{\text{stg}}$</td>
<td>-25 to +85</td>
<td>°C</td>
</tr>
<tr>
<td>Junction temperature</td>
<td></td>
<td>$T_j$</td>
<td>135</td>
<td>°C</td>
</tr>
<tr>
<td>International Protection</td>
<td></td>
<td>$IP$</td>
<td>66</td>
<td></td>
</tr>
</tbody>
</table>

$^3$ Not designed to be driven with reverse bias

### Electrical Characteristics

at $T_{\text{amb}} = 25°C$, on heat sink ($S \geq 200 \, \text{cm}^2$), $t_{\text{measuring}} < 1 \, \text{s}$, unless otherwise specified

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test conditions</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward voltage $^1$</td>
<td>$I_F = 350 , \text{mA}$</td>
<td>$V_F$</td>
<td>2.75</td>
<td>3.3</td>
<td>3.5</td>
<td>V</td>
</tr>
<tr>
<td>Forward voltage $^1$</td>
<td>$I_F = 1000 , \text{mA}$</td>
<td>$V_F$</td>
<td></td>
<td>3.7</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Reverse voltage</td>
<td>$I_F = 350 , \text{mA}$</td>
<td>$V_R$</td>
<td></td>
<td>5</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>ESD withstand voltage</td>
<td></td>
<td>$V_{\text{ESD}}$</td>
<td></td>
<td>8</td>
<td></td>
<td>kV</td>
</tr>
<tr>
<td>Thermal resistance junction-case</td>
<td></td>
<td>$R_{\text{JUC}}$</td>
<td></td>
<td>10</td>
<td></td>
<td>K/W</td>
</tr>
</tbody>
</table>

JENOPTIK Polymer Systems GmbH, D-12555 Berlin, Köpenicker Str.325 b, Haus 201  
Tel.: +49-30-6576 2543, Fax : +49-30-6576 2545  
1 of 3
**Optical Characteristics**

at \(T_{amb} = 25^\circ C\), on heat sink \((S \geq 200 \text{ cm}^2)\), \(t_{Meas} < 1 \text{ s}\), unless otherwise specified

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test conditions</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiant power (^1,^2)</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(\Phi_e)</td>
<td>160</td>
<td></td>
<td></td>
<td>mW</td>
</tr>
<tr>
<td>Radiant power (^1,^2)</td>
<td>(I_F = 1000 \text{ mA})</td>
<td>(\Phi_e)</td>
<td>340</td>
<td></td>
<td></td>
<td>mW</td>
</tr>
<tr>
<td>Luminous power (^1,^2)</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(\Phi_v)</td>
<td>85</td>
<td></td>
<td></td>
<td>lm</td>
</tr>
<tr>
<td>Luminous power (^1,^2)</td>
<td>(I_F = 1000 \text{ mA})</td>
<td>(\Phi_v)</td>
<td>175</td>
<td></td>
<td></td>
<td>lm</td>
</tr>
<tr>
<td>Luminous intensity (^1,^4)</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(I_v)</td>
<td>?</td>
<td>440</td>
<td></td>
<td>cd</td>
</tr>
<tr>
<td>Luminous intensity (^1,^4)</td>
<td>(I_F = 1000 \text{ mA})</td>
<td>(I_v)</td>
<td>?</td>
<td>890</td>
<td></td>
<td>cd</td>
</tr>
<tr>
<td>Peak wavelength</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(\lambda_p)</td>
<td>520</td>
<td></td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td>Dominant wavelength</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(\lambda_{dom})</td>
<td>519</td>
<td>528</td>
<td>543</td>
<td>nm</td>
</tr>
<tr>
<td>Spectral bandwidth at 50%</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(\Delta\lambda_{0.5})</td>
<td>33</td>
<td></td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td>Viewing angle</td>
<td>(I_F = 350 \text{ mA})</td>
<td>(2\phi)</td>
<td>23</td>
<td></td>
<td></td>
<td>deg</td>
</tr>
</tbody>
</table>

\(^1\) only recommended on optimal heat sink  
\(^2\) for information only  
\(^4\) CIE127:2007 Condition A (0.001 sr)

Note: All measurements carried out with JENOPTIK Polymer Systems equipment, on aluminium heat sink, \(S = 200 \text{ cm}^2\), passive cooling. Measurement results and curve characteristics obtained with other heat sinks may differ.

**Safety Advise***

The evaluation of eye safety occurs according to the standard CIE/IEC 62471:2006 ("photobiological of lamps and lamp systems"). Within the risk grouping system of this CIE standard, the LED specified in this data sheet falls at maximum into the **Group 1- Low Risk**

At normal behaviour and use, this LED does not pose a hazard.

*Note: Safety classification of an optical component mainly depends on the intended application and the way the component is being used. Furthermore, all statements made to classification are based on calculations and are only valid for this LED "as it is", and at continuous operation, assuming direct view and maximum forward current. Using pulsed current or altering the light beam with additional optics may lead to different safety classifications. Therefore these remarks should be taken as recommendation and guideline only.*
We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Prototype 19.06.2015 rev. 01

Jumbo®-LED

Lead (Pb) free Product - RoHS Compliant

ELJ-520-628-2

Prototype

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype

ELJ-520-628-2

19.06.2015  rev. 01

Jumbo®-LED  Lead (Pb) free Product - RoHS Compliant

Prototype