# AIDS to NAVIGATION

## *150mm LED-disc light sources family E801, E802, E803, E804*

**The family consists of four LED-disc light sources with the diameter 150mm of different colours: E801 - red, E802 - yellow, E803 - green, E804 - white. The discs are of robust compounded design guaranteeing high resistance to harsh environmental conditions and high reliability. They can be used in different type of lanterns - in sea buoys, in moorings, and in other fixed lights. To extend the visibility range of a light, several LED-discs can be cascaded in one lantern. The discs are to be controlled by the disc-flasher E864**

### *General benefits of using LED-lanterns*

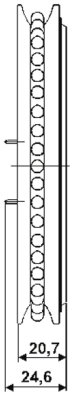
*Long lifetime (up to ten years)* makes the maintenance costs of LED-lanterns much lower because there will be no need in frequent and expensive maintenance trips to lights only for the purpose of changing of broken bulbs.

*Significantly lower power consumption (up to 1.5 times)* Due to higher efficiency of LEDs. This is very useful when using them in primary battery powered sea buoys as well as in case of lighthouses and beacons powered by the solar or wind energy.

*No need for applying colour filters and additional optics.* The color of the light of LEDs is determined by the physical properties of light-emitting semiconductor material used in them i.e. by the type of LEDs. Therefore, no additional colour filter is needed which would cause some loss of light intensity.

### *General benefits of using the family*

- relatively high intensity of the radiated light - from 10 to 30 cd
- low power consumption - from 2.1 to 3.3 W
- wide range of input voltages - from 6 V to 20 V
- optional increasing of power by an external resistor
- optional choice of vertical divergence


Cybernetica AS
**Department of Navigation Systems EKTA**
**Call +372 639 7991**
Fax +372 639 7992
E-mail: ekta@ekta.ee
Akadeemia tee 21, 12618 Tallinn, ESTONIA
Visit our website at www.ekta.ee

*Note: The actual diameter of LED-discs with different lenses varies from 130 mm up to 140. mm*

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*150mm LED-disc light sources family E801, E802, E803, 804*

## Specifications

| | |
|---|---|
| **Input voltage:** | 6 V…20 V DC |
| **Temperature range** | -30°C to +60°C* (IEC 60068-2-1,2,14) |
| **Relative humidity** | max. 98% at the temperature +35°C (IEC 60068-2-3) |
| **Height** | 21 mm |
| **Diameter** | 129 mm (E80x), 132 mm (E80x.1) |
| **Weight** | 345 g |

***) the temperature range can be optionally extended**

**LED-discs E801 and E801.1****

| **Type** | E801 | | E801.1*** | |
|---|---|---|---|---|
| **Colour** | red | | red | |
| **Typical wavelenght** | 630 nm | | 630 nm | |
| **Vertical divergence $2\theta_{1/2}$** | ≥25° | | ≥8° | |
| **Vertical divergence $2\theta_{1/10}$** | ≥50° | | ≥25° | |
| **Power setting resistor** | none | 2.4 kΩ | none | 2.4 kΩ |
| **V. div. on intensity 0,5 cd $2\theta_{(0.5cd)}$** | ≥60° | ≥70° | | |
| **Light intensity** | 10 cd | 15 cd | 20 cd | 30 cd |
| **Power consumption** | 2.1 W | 3.3 W | 2.1 W | 3.3 W |

**LED-discs E802 and E802.1****

| **Type** | E802 | | E802.1*** | |
|---|---|---|---|---|
| **Colour** | yellow | | yellow | |
| **Typical wavelenght** | 592 nm | | 592 nm | |
| **Vertical divergence $2\theta_{1/2}$** | ≥25° | | ≥8° | |
| **Vertical divergence $2\theta_{1/10}$** | ≥50° | | ≥25° | |
| **Power setting resistor** | none | 2.4 kΩ | none | 2.4 kΩ |
| **V. div. on intensity 0,5 cd $2\theta_{(0.5cd)}$** | ≥60° | ≥70° | | |
| **Light intensity** | 10 cd | 15 cd | 20 cd | 30 cd |
| **Power consumption** | 2.1 W | 3.3 W | 2.1 W | 3.3 W |

**LED-discs E80 and E803.1****

| **Type** | E803 | | E803.1*** | |
|---|---|---|---|---|
| **Colour** | green | | green | |
| **Typical wavelenght** | 525 nm | | 525 nm | |
| **Vertical divergence $2\theta_{1/2}$** | ≥25° | | ≥8° | |
| **Vertical divergence $2\theta_{1/10}$** | ≥50° | | ≥25° | |
| **Power setting resistor** | none | 2.4 kΩ | none | 2.4 kΩ |
| **V. div. on intensity 0,5 cd $2\theta_{(0.5cd)}$** | ≥60° | ≥70° | | |
| **Light intensity** | 15 cd | 20 cd | 30 cd | 40 cd |
| **Power consumption** | 2.2 W | 3.3 W | 2.2 W | 3.3 W |

**LED-discs E804 and E804.1****

| **Type** | E804 | | E804.1*** | |
|---|---|---|---|---|
| **Colour** | white | | white | |
| **Vertical divergence $2\theta_{1/2}$** | ≥15° | | ≥8° | |
| **Power setting resistor** | none | 2.4 kΩ | none | 2.4 kΩ |
| **V. div. on intensity 0,5 cd $2\theta_{(0.5cd)}$** | ≥60° | ≥60° | | |
| **Light intensity** | 10 cd | 15 cd | 20 cd | 30 cd |
| **Power consumption** | 2.2 W | 3.3 W | 2.2 W | 3.3 W |

****) power increased by external resistor**

*****) light intensity increased by addition of UV-stabilized plastic lens**

*Edited: September 2000*