



next generation led

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## TL T5



### Properties

- Lifespan L80B10: 70.000 hours
- External driver (selv type)
- Fully Dimmable (1-10 V or DALI)
- Safety Extra Low voltage equivalent
- IP65: dust and waterproof
- Flicker free to reduce the eyestrain
- Environmentally friendly
- High resistance to corrosive gasses
- Instant switch-on
- Protection Class III
- Temp. resistance: 85°C
- Norms: IEC/EN61195, IEC/EN62031, IEC/EN62717, EN61347-1, EN61347-2-13, EN62384, EN6154, EN55015, EN62386-102, IEC60068-2-6, IEC60068-2-2 and IEC60068-2-29
- Warranty: 6 years

### Application

Offices, hospitals, hotels, supermarkets, library, corridors,...

165lm/w

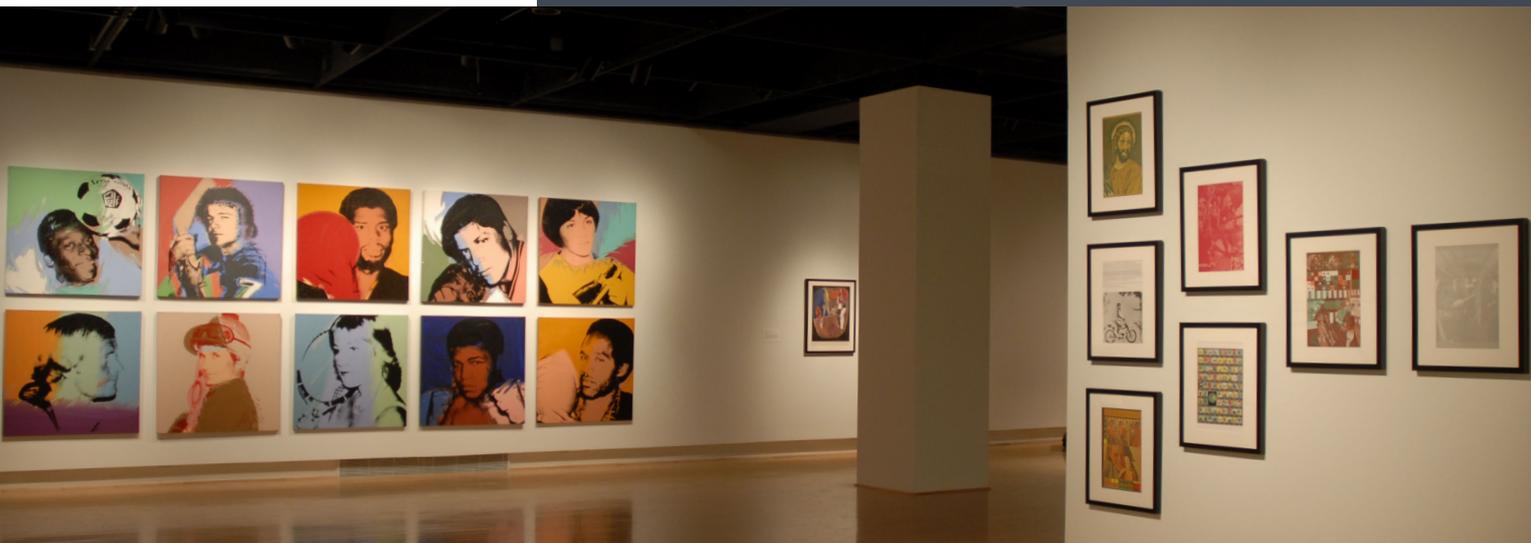
Dimmable

External Driver

### Specifications

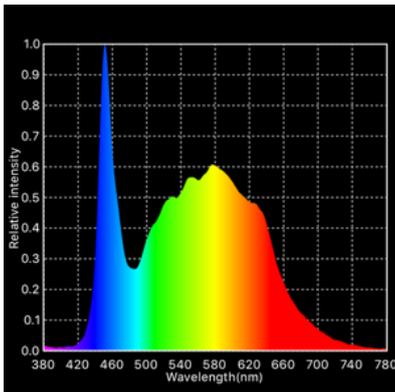
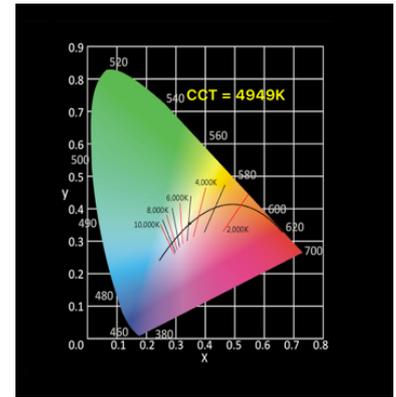
|                       |          |                          |                    |
|-----------------------|----------|--------------------------|--------------------|
| LED T5                | 60       | 120                      | 150                |
| Length                | 549 mm   | 1149 mm                  | 1449 mm            |
| Power                 | 8.5 W    | 17 W - 32.5W             | 30 W - 43W         |
| Luminous flux         | 1400 Lm  | 2800 Lm - 5350Lm         | 4950 Lm - 7095Lm   |
| Diameter              |          | 16 mm (cap 18.5 mm)      |                    |
| Color temperature     |          | 3000K - 4000 K - 5000 K  |                    |
| IP Index              |          | IP 65                    |                    |
| Color rendering index |          | 83 (92 and 98 available) |                    |
| Temperature in use    |          | - 40°C ~ +45°C           |                    |
| Dimmable              |          | 1-10 V or DALI           |                    |
| Beam angle            |          | 130 °                    |                    |
| Driver requirement    | 135-20Li | 170-35Li                 | 170-35Li-1150-50Fr |

Updated: August 2017



## CIE 1931

The CIE color space, developed in 1931, is still used to define colors, and as a reference for other color spaces. The figure is a two-dimensional display of colors of the same intensity (brightness), which is based on observations of color measurements by people.

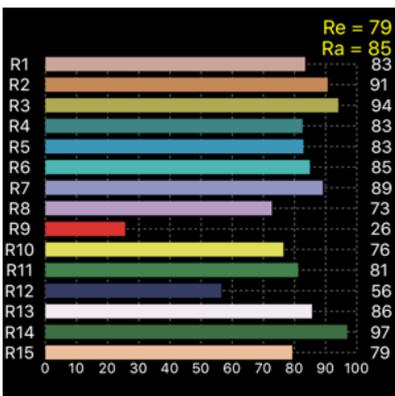
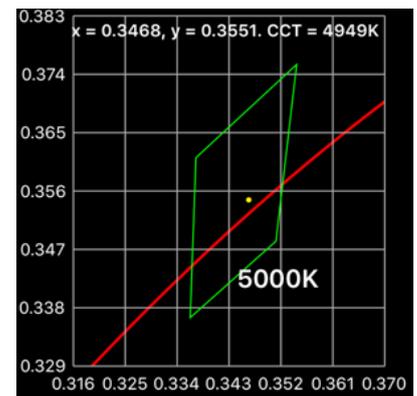


## SPECTRUM

Isaac Newton used the Latin word spectrum to define the color series which arose when he dropped a bundle of sunlight through a glass prism. The color spectrum consists of the colors of the rainbow with the color sequence red-orange-yellow-green-blue-indigo-violet, which corresponds to bearish wave length (increasing frequency) of the light waves.

## C78 377

ANSI C 78.377 is now the standard for color quality, as determined by the American National Standards Institute. ANSI recommends lamp manufacturers to stay within a 4-step ellipse. This means that manufacturers with a particular focus on the CIE diagram have a broad range of observable differences.



## CRI HISTOGRAM

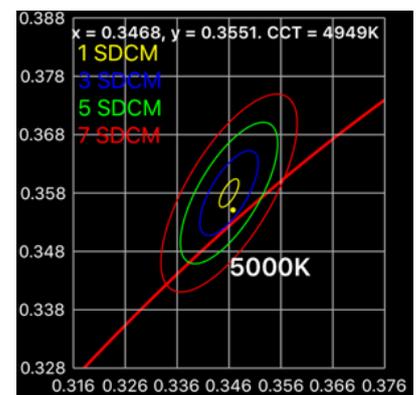
The color reproduction of a light source indicates whether the color of an object can be displayed true to nature. The graph shows whether we can accurately determine color, depending on the color rendering properties of the light source.

- Ra = average of R1 to R8
- Re = average of R1 to R15
- R9 = saturated red. Should be as high as possible.

## SDCM

SDCM is an acronym which stands for Standard Deviation Colour Matching. SDCM has the same meaning as a "MacAdam ellipse". A 1-step MacAdam ellipse defines a zone in the CIE 1931 2 deg (xy) colour space within which the human eye cannot discern colour difference. Most LEDs are binned at the 4-7 step level, in other words you certainly can see colour differences in LEDs that are ostensibly the same colour.

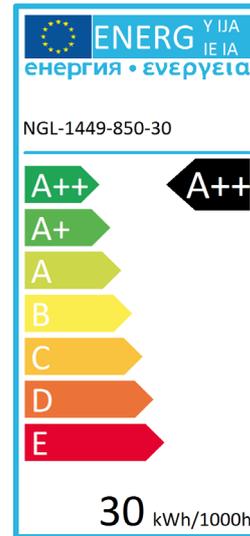
| SDCM | CCT @ 3000K | $\Delta UV$ |
|------|-------------|-------------|
| 1x   | ±30K        | ±0.0007     |
| 2x   | ±60K        | ±0.0010     |
| 4x   | ±100K       | ±0.0020     |
| 7-8x | ±175K       | ±0.0060     |



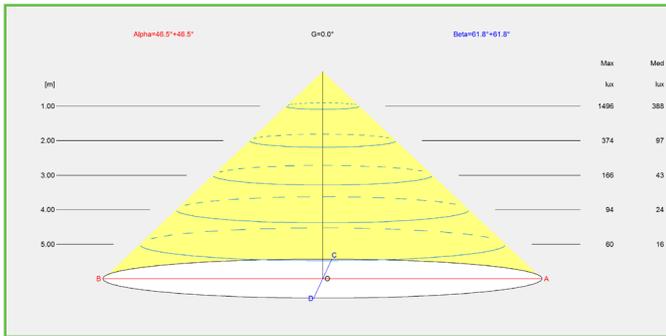
## ENERGY LABEL

Electrical appliances carry an energy label. This label prints the so-called energy efficiency score in classes. These classes range from 'very energy efficient' (A++) to 'very waste of energy' (E).

A more expensive new device may eventually turn out to be cheaper if the energy score is good. IPEA is the new system for luminaire energy efficiency assessment.



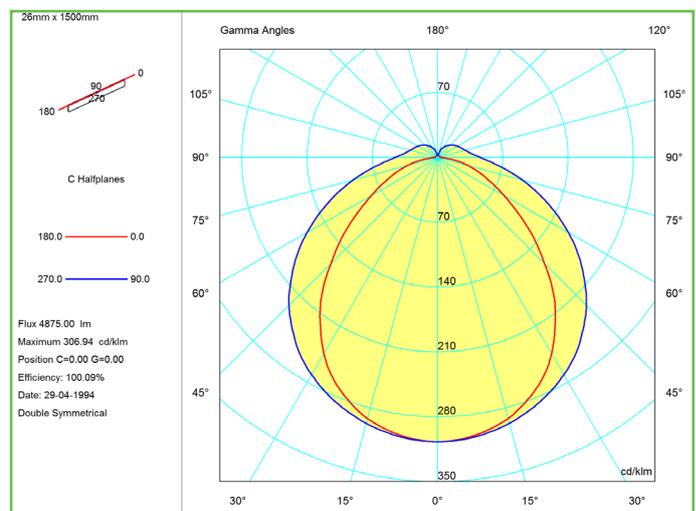
## BEAM



The Illuminance Cone Diagram indicates the maximum illuminance at different distances from the fixture.>

## POLAR DIAGRAM

The polar luminous intensity graph illustrates the distribution of luminous intensity, in candelas, for the transverse (solid line) and axial (dashed line) planes of the luminaire. The shown curve provides a visual guide to the type of distribution expected from the luminaire e.g. wide, narrow, direct, indirect... in addition to intensity.



## TL T5

| REFERENCE | LENGTH  | WATT   | COLOR         | DRIVER    | DIMMABLE |
|-----------|---------|--------|---------------|-----------|----------|
| 220-0001  | 549 mm  | 8,5 W  | 4000K - 5000K | 135-20Li  | Yes      |
| 220-0002  | 1149 mm | 17 W   | 4000K - 5000K | 170-35Li  | Yes      |
| 220-0003  | 1149 mm | 32,5 W | 4000K - 5000K | 170-35Li  | Yes      |
| 220-0004  | 1449 mm | 30 W   | 4000K - 5000K | 170-35Li  | Yes      |
| 220-0005  | 1449 mm | 43 W   | 4000K - 5000K | 1150-50Fr | Yes      |

