

# PRODUCT DATASHEET

## NAV 50 LED FIL V 4000LM 21W 740 E27

NAV LED FIL V | LED replacement for NAV lamps in design-oriented outdoor applications



### Areas of application

- Streets
- Area lighting
- Pedestrian zones
- Parks
- Outdoor applications only in suitable luminaires

### Product benefits

- Same design as traditional NAV lamps with frosted, ellipsoid full glass bulb
- Full use of reflector of existing luminaire thanks to 360 degree beam angle
- Saves up to 78 % energy when used as replacement for sodium vapor lamps (NAV)
- Instant 100 % light, no warm-up time
- Similar light distribution as traditional NAV lamps

### Product features

- Suitable for operation with conventional control gear (CCG) or 230 V AC mains
- Very high efficiency of up to 190 lm/W
- Power factor: 0.9
- Type of protection: IP65
- Surge protection: up to 2 kV (L-N)



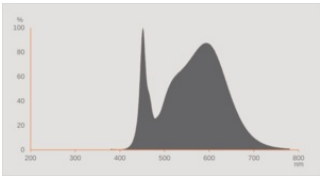
## TECHNICAL DATA

### Electrical data

|                                                                  |             |
|------------------------------------------------------------------|-------------|
| Nominal wattage                                                  | 21 W        |
| Construction wattage                                             | 21.00 W     |
| Nominal voltage                                                  | 220...240 V |
| Claimed equiv. conventional lamp power                           | 50 W        |
| Nominal current                                                  | 90 mA       |
| Type of current                                                  | AC          |
| Inrush current                                                   | 6.3 A       |
| Operating frequency                                              | 50/60 Hz    |
| Mains frequency                                                  | 50/60 Hz    |
| Max. lamp no. on circuit break. 10 A (B)                         | 11          |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 10          |
| Max. lamp no. on circuit break. B10 A - CCG with compensation    | 22          |
| Max. lamp no. on circuit break. 16 A (B)                         | 17          |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 16          |
| Max. lamp no. on circuit break. B16 A - CCG with compensation    | 35          |
| Total harmonic distortion                                        | 15 %        |
| Power factor $\lambda$                                           | > 0.90      |

### Photometrical data

|                                         |            |
|-----------------------------------------|------------|
| Luminous intensity                      | N/A        |
| Luminous flux                           | 4000 lm    |
| Nominal useful luminous flux 90°        | 4000 lm    |
| Luminous efficacy                       | 190 lm/W   |
| Lumen main.fact.at end of nom.life time | 0.70       |
| Light color (designation)               | Cool White |
| Color temperature                       | 4000 K     |
| Color rendering index Ra                | 70         |
| Light color                             | 740        |
| Standard deviation of color matching    | ≤6 sdcn    |
| Rated LLMF at 6,000 h                   | 0.80       |
| Flickering metric (Pst LM)              | 1          |
| Stroboscope effect metric (SVM)         | 0,4        |



Light technical data

|                                    |          |
|------------------------------------|----------|
| Beam angle                         | 360 °    |
| Warm-up time (60 %)                | < 0.50 s |
| Starting time                      | < 0.5 s  |
| Rated beam angle (half peak value) | 360.00 ° |

Dimensions & Weight



|                  |           |
|------------------|-----------|
| Overall length   | 170.00 mm |
| Diameter         | 38.00 mm  |
| Maximum diameter | 38 mm     |
| Product weight   | 80.00 g   |

Temperatures & operating conditions

|                                      |              |
|--------------------------------------|--------------|
| Ambient temperature range            | -20...+50 °C |
| Maximum temperature at tc test point | 80 °C        |

Lifespan

|                                     |         |
|-------------------------------------|---------|
| Lifespan                            | 25000 h |
| Number of switching cycles          | 100000  |
| Lumen maintenance at end of serv    | 0.70    |
| Rated lamp survival factor at 6,000 | ≥ 0.90  |

Additional product data

|                             |        |
|-----------------------------|--------|
| Base (standard designation) | E27    |
| Mercury content             | 0.0 mg |

|                |                          |
|----------------|--------------------------|
| Mercury-free   | Yes                      |
| Product remark | Available from June 2023 |

### Capabilities

|          |    |
|----------|----|
| Dimmable | No |
|----------|----|

### Certificates & Standards

|                                              |                 |
|----------------------------------------------|-----------------|
| Energy efficiency class                      | B <sup>1)</sup> |
| Energy consumption                           | 21.00 kWh/1000h |
| Type of protection                           | IP65            |
| Standards                                    | CE / EAC / UKCA |
| Photobiological safety group acc. to EN62778 | RG1             |

<sup>1)</sup> Energy efficiency class (EEC) on a scale of A (highest efficiency) to G (lowest efficiency)

### Country-specific categorizations

|                 |                |
|-----------------|----------------|
| Order reference | NAV 50 LED FIL |
|-----------------|----------------|

### LOGISTICAL DATA

|                              |              |
|------------------------------|--------------|
| Temperature range at storage | -20...+80 °C |
|------------------------------|--------------|

### Energy labelling regulation data acc EU 2019/2015

|                                                     |              |
|-----------------------------------------------------|--------------|
| Lighting technology used                            | LED          |
| Non-directional or directional                      | NDLS         |
| Mains or non-mains                                  | MLS          |
| Light source cap-type (or other electric interface) | E27          |
| Connected light source (CLS)                        | No           |
| Color-tuneable light source                         | No           |
| Envelope                                            | No           |
| High luminance light source                         | No           |
| Anti-glare shield                                   | No           |
| Correlated colour temperature type                  | SINGLE_VALUE |
| Standby power                                       | N/A          |
| Networked standby power for CLS                     | N/A          |
| Claim of equivalent power                           | No           |
| Length                                              | 170.00 mm    |
| Height                                              | 38.00 mm     |
| Width                                               | 38.00 mm     |

|                                                      |            |
|------------------------------------------------------|------------|
| Chromaticity coordinate x                            | 0,38       |
| Chromaticity coordinate y                            | 0,38       |
| R9 Colour rendering index                            | >0         |
| Beam angle correspondence                            | SPHERE_360 |
| Survival factor                                      | 0,9        |
| Displacement factor                                  | 0.9        |
| LED light source replaces a fluorescent light source | No         |
| EPREL ID                                             | 1371176    |
| Model number                                         | AC46361    |

### Safety advice

- Not suitable for operation with ignitors
- Operation on the capacitor can lead to a reduction of the power factor of the system.
- When installed horizontally, the  $t_c$  point of the lamp is located on the top side of the lamp.
- Use in tight luminaires and luminaires with tight reflectors not recommended.
- Only suitable for temperatures of up to 50°C inside of the luminaire. Use in tight luminaires and luminaires with tight reflectors not recommended.

### DOWNLOAD DATA

| Documents and certificates                                                          |                               |
|-------------------------------------------------------------------------------------|-------------------------------|
|   | User instruction              |
|   | Declarations Of Conformity CE |
| Photometric and lighting design files                                               |                               |
|  | IES file (IES)                |
|  | LDT file (Eulumdat)           |
|  | UGR file (UGR table)          |
|   | LDC typ polar                 |
|  | Spectral power distribution   |

### LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume               |
|---------------|------------------------------|--------------------------------------|--------------|----------------------|
| 4099854071997 | Folding box<br>1             | 44 mm x 44 mm x 256 mm               | 123.00 g     | 0.50 dm <sup>3</sup> |
| 4099854072000 | Shipping box<br>6            | 274 mm x 152 mm x 117 mm             | 920.00 g     | 4.87 dm <sup>3</sup> |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

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## DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.