

- Sensing (input)
- Signal processing
- Safety management Switching (output)









I. PRODUCT FEATURES

Description	LED T5 diffused glass lamp
Beam Angle	130 °
Correlated Colour Temperature (CCT)	4000K
Colour Consistency over useful lifetime	3 SDCM
Colour Rendering Index (CRI)	83
Lamp Initial Flux	6,150 lm
Lamp wattage	40 W
Energy Efficiency Rating	A++
Exchangeability	Standard G5 cap base
Photo-biological safety	RG 0 (Exempt)
Ingress Protection	IP65
Corrosion Resistance	Impermeable to corrosive gas and vapours
Protection Class	III, SELV compliant
Glow Wire Flammability Index	850 °C
Useful Lifetime (L80B10) according to TM-21 protocol	50,000 hours
Control Gear	External certified constant current LED Driver
Controllability	Fully dimmable down to 1% (1-10V, DALI)
Ignition Time	Instant
Switching cycles	Unlimited
Certification & approvals	CE, KEMA (pending)

Ef0ra LED is not a retrofit LED tube but an innovative exchangeable light source delivering excellent energy efficiency and highest durability. The diffused glass has a unique matt surface ensuring minimal glare and a pleasing fluorescent-like aspect. Glass provides maximal protection against ingress of corrosive gases and vapours that causes premature aging or drastic failure of LED semiconductor devices and other electronic components.



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2. MAXIMUM RATINGS

Items	Symbol	Value
Operating Temperature	Ta	-30 °C ~ +45 °C
Storage Temperature	Ts	-40 ∘C ~ +80 ∘C
Rated Tc Temperature *	Tc	+ 75 ° C
Permissible Forward Voltage	Vf	50 VDC

^{*)} Tc point is located in the middle of the back side of the lamp

3. OPTICAL CHARACTERISTICS

Items	Value
Colour Code	840
Colour Temperature	4000K
Colour Rending Index (CRI)	83
Colour Consistency (over useful lifetime)	3 SDCM
Luminous Flux	6,150 lm
initial lumen	
Luminous Flux	5,800 lm
stabilized lumen*	
Efficacy	155 lm/W
initial lumen	
Efficacy	145 lm/W
stabilized lumen*	

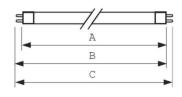
^{*)} After 25 minutes of thermal balance

4. ELECTRICAL CHARACTERISTICS

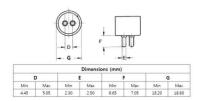
Items	Value
Lamp Voltage	38 VDC
Lamp Current	1,050 mA
Lamp Wattage	40 W

Forward Voltage & Wattage tolerance: +/- 10%

5. DIMENSIONAL DRAWINGS



	Dimensions (mm)			Weight (g)
Α	В		С	
Max	Min	Max	Max	312
1449.0	1453.7	1456.1	1463.2	



Mechanical dimensions tolerance: +/- 0.5mm

Luminous Flux tolerance: +/-10%

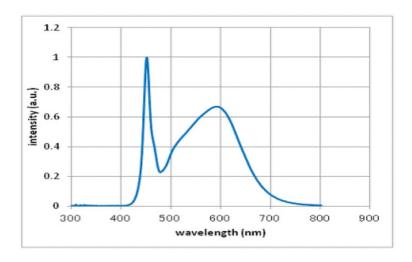


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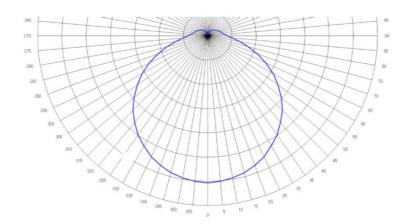
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6. SPECTRAL DISTRIBUTION & LIGHT DISTRIBUTION

Spectral Distribution



Light distribution



7. PHOTOBIOLOGICAL SAFETY DATA

Items	Classification (Risk Group)
Actinic UV	RG 0 Exempt
Near UV	RG 0 Exempt
Retinal Blue Light 500Lux method	RG 0 Exempt
Retinal Blue Light 200mm method	RG 0 Exempt
Retinal Thermal	RG 0 Exempt
Infrared	RG 0 Exempt

Photo-biological hazards evaluated on the basis of European norm: EN 62471

As a result of laboratory evaluation, no specific safety measures are required. E-LED is an intrinsically eye-safe light source.



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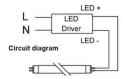
8. DRIVING INSTRUCTIONS

LED Driver typeConstant CurrentExternal Constant Current LED Driver1,050mA

Exceeding recommended driving conditions may cause premature aging

Ef0ra LEDT5 lamp is not a retrofit Lamp for FLT8 or FLT5 (fluorescent) tube replacement applications.

An external constant current LED driver complying for European Safety & Performance norms must be integrated. SELV equiv. LED drivers are recommended. LED drivers should be tested for compatibility with the lamp and qualified accordingly.



- Conformity to the following regulations applicable to LED drivers is mandatory:
 - . EN61347-1
 - . EN61347-2-13
 - . EN62384
 - . EN61547
 - . EN55015
 - . EN62386-102
 - . IEC 60068-2-6
 - . IEC 60068-2-27
 - . IEC 60068-2-29

9. COMPLIANCE TO IEC NORMS & EU/ROHS

- All measurements were conducted according to the following norms:
 - . IEC/EN 61195
 - . IEC/EN 62031
 - . IEC/EN 62717
- The product is compliant with European Directive 2002/95/EC of January 2003 on restriction of the use of listed Hazardous Substances in Electrical & Electronic Equipment (RoHS)

10. CAUTIONS

- Store in its original packing until installation
- Maintain in storage temperature between -40 °C and +80 °C
- Handle with care during installation into the luminaire in accordance with instructions
- Luminaire makers are urged to conform to the international standards of luminaire design: IEC 60598
- Failure to conform to above listed norms and recommendations will render the warranty null & void
- The warranty is void if the product is not used for the purpose for which it is designed
- We recommend that the lamp should be disposed in an appropriate way at the end of its useful lifetime according to national disposal & recycling regulations

