

# Impact-resistant and waterproof LED luminaires

For construction, shipbuilding and industry



# TubeMaster G2

## Impact-resistant and waterproof LED luminaires

The new generation TubeMaster series of extremely impact-resistant IK10 LED luminaires offers up to IP67 protection against moisture and dust. This series of luminaires offers the ideal solution for temporary lighting at events, construction sites, shipyards or other industrial applications where rough service luminaires are needed.



Designed for use as a rough service luminaire.

The TubeMaster contains the most advanced LED technology, adapted to mobile use and meets the additional requirements for rough service luminaires. The luminaires are available in lumen packages that run from 1700 up to 4800 lumen and are intended as a direct replacement for fluorescent luminaires. Compared to these conventional luminaires, the TubeMaster is virtually maintenance-free, very energy efficient and has an attractive TCO and a quick payback period.



Attractive low TCO.

### Modern design

The modern design based on the latest insights ensures a long service life and optimum light distribution. The aluminum profile is designed for optimal cooling of the LEDs and the diffuser has been specially designed to give the light a pleasant and natural character. The TubeMaster is also available in a version with emergency power supply for escape route lighting.

### Light quality

The LEDs have a high color rendering index (CRI 80+), which means that all colors are rendered faithfully and appear neutral. The quality of the light surpasses that of the familiar fluorescent lamps. The blinding harsh light that characterizes many 1st and 2nd generation LED fixtures is completely missing. The extremely impact-resistant tubes are made of highly transparent UV-stabilized polycarbonate, provided with a replaceable clear but tough and chemically resistant polyester protective film.

### Rubber end caps

Innovative are the octagonal rubber end caps of the TubeMaster. The shape prevents the luminaire from unwanted rolling and allows the user to adjust the light in steps of 45 degrees. In addition to the wired version, the end caps are also available with a socket for the purpose of looping through.

The ingress protection class varies from IP44 to IP67 depending on the contact material mounted in the end caps. Optional accessories can be placed on the end caps to attach the fixtures; such as magnet systems, clamps or eye bolts to enable use as a suspended luminaire.

### Customization

Customization by means of cable printed with your company name or the use of colored end caps is possible. For permanent installation in sunlight, an optionally available, less impact-resistant but highly UV-resistant PMMA tube is available. The TubeMaster is fully recyclable and has a 3-year warranty on material and workmanship.

# TM 1500 G2

## Features

Compact, cost-effective version with all the advantages of the large TubeMasters. Direct replacement for 18W T8 TL fluorescent fixtures. Optionally with a connection cord with molded plug or CEE plug.

Compact powerhouse.



- rubber octagonal 45° end caps
- highly transparent polycarbonate tube
- heat sink made from anodized aluminium
- high quality Samsung LEDs
- Osram driver
- anti-glare diffuser
- provided with protective film as standard
- available in IEC protection class I, II and III
- 3 year warranty

- luminous flux: 1700 lm \*
- 105 lm/W
- color temperature: 5000K (daylight)
- color rendering index: Ra > 80
- beam angle: 120°
- lifetime 50.000 h (L70B30 Ta 25°C)
- power factor  $\lambda$ : > 0.95

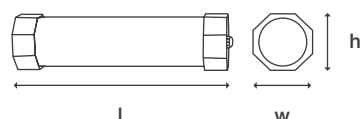
# TM 1500 G2 overview

Article	Class	Volt	Watt	Lumen	Description
118087	I	230	16	1700	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
118088	I	230	16	1700	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
118090	I	230	16	1700	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
118091	I	230	16	1700	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
118093	I	230	16	1700	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118094	I	230	16	1700	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118096	I	230	16	1700	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118097	I	230	16	1700	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118101	II	230	16	1700	5 m. H07RN-F connection cord with contour plug
118102	II	230	16	1700	5 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
118103	II	230	16	1700	10 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
118465	III	24	16	1700	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118466	III	24	16	1700	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118467	III	24	16	1700	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118468	III	24	16	1700	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118469	III	42	16	1700	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118470	III	42	16	1700	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118442	III	42	16	1700	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118471	III	42	16	1700	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118472	III	110 DC	16	1700	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118473	III	110 DC	16	1700	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118474	III	110 DC	16	1700	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118475	III	110 DC	16	1700	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket

\* preliminary data, light measurements not yet validated



Type	l x h x w	Weight*
TM 1500 G2	480 x 122 x 122	2,5 kg



\* weight without cord

# TM 2500 G2

## Features

Now 30% shorter than the first generation but with the same high performance. Direct replacement for 36W T8 TL fluorescent fixtures. Optionally with a connection cord with molded plug or CEE plug.

30% smaller, same high light output.



- rubber octagonal 45° end caps
- highly transparent polycarbonate tube
- heat sink made from anodized aluminium
- high quality Samsung LEDs
- Osram driver
- anti-glare diffuser
- provided with protective film as standard
- available in IEC protection class I, II and III
- 3 year warranty

- luminous flux: 2950 lm \*
- 105 lm/W
- color temperature: 5000K (daylight)
- color rendering index: Ra > 80
- beam angle: 120°
- lifetime 50.000 h (L70B30 Ta 25°C)
- power factor  $\lambda$ : > 0.95

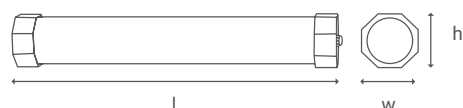
# TM 2500 G2 overview

Article	Class	Volt	Watt	Lumen	Description
122000	I	230	28	2950	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
122001	I	230	28	2950	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
122002	I	230	28	2950	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
122003	I	230	28	2950	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
122004	I	230	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122005	I	230	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122006	I	230	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
122007	I	230	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
122032	II	230	28	2950	5 m. H07RN-F connection cord with contour plug
122008	II	230	28	2950	5 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
122009	II	230	28	2950	10 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
122010	III	24	28	2950	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
122011	III	24	28	2950	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
122012	III	24	28	2950	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
122013	III	24	28	2950	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
122014	III	42	28	2950	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
122015	III	42	28	2950	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
122016	III	42	28	2950	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
122017	III	42	28	2950	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
122018	III	110 DC	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122019	III	110 DC	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122020	III	110 DC	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
122021	III	110 DC	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket

\* preliminary data, light measurements not yet validated



Type	l x h x w	Weight*
TM 2500 G2	780 x 122 x 122	3,75 kg



\* weight without cord

# TM 2500N G2

## Features

The most efficient type with 115 lm/W. Direct replacement for 36W T8 TL fluorescent fixtures. Equipped with emergency power module with a battery for 1 hour of autonomy.

Optionally with a connection cord with molded plug or CEE plug.

Emergency power version with 1 hour of autonomy.



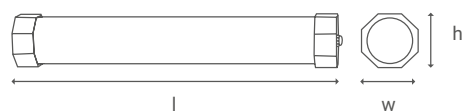
- rubber octagonal 45° end caps
- highly transparent polycarbonate tube
- heat sink made from anodized aluminium
- high quality Samsung LEDs
- Osram driver
- anti-glare diffuser
- provided with protective film as standard
- available in IEC protection class I, II and III
- 3 year warranty
- luminous flux: 2950 lm \*
- 105 lm/W
- color temperature: 5000K (daylight)
- color rendering index: Ra > 80
- beam angle: 120°
- lifetime 50.000 h (L70B30 Ta 25°C)
- power factor  $\lambda$ : > 0.95
- battery power autonomy 1h at 20% luminance



## TM 2500N G2 overview

Article	Class	Volt	Watt	Lumen	Description
122022	I	230	28	2950	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
122023	I	230	28	2950	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
122024	I	230	28	2950	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
122025	I	230	28	2950	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
122026	I	230	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122027	I	230	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
122028	I	230	28	2950	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
122029	I	230	28	2950	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
122030	II	230	28	2950	5 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
122031	II	230	28	2950	10 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.

\* preliminary data, light measurements not yet validated



Type	l x h x w	Weight*
TM 2500N G2	780 x 122 x 122	4 kg

\* weight without cord

# TM 4000 G2

## Features

The most powerful type with 4800 lm. Direct replacement for 58W T8 TL fluorescent fixtures. Optionally with a connection cord with molded plug or CEE plug.

The most powerful type with 4800 lm.



- rubber octagonal 45° end caps
- highly transparent polycarbonate tube
- heat sink made from anodized aluminium
- high quality Samsung LEDs
- Osram driver
- anti-glare diffuser
- provided with protective film as standard
- available in IEC protection class I, II and III
- 3 year warranty

- luminous flux: 4800 lm \*
- 100 lm/W
- color temperature: 5000K (daylight)
- color rendering index: Ra> 80
- beam angle: 120°
- lifetime 50.000 h (L70B30 Ta 25°C)
- power factor  $\lambda$ : > 0.95

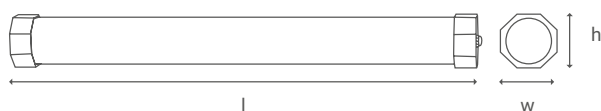
# TM 4000 G2 overview

Article	Class	Volt	Watt	Lumen	Description
118024	I	230	48	4800	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
118025	I	230	48	4800	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough 0.5 m.
118027	I	230	48	4800	5 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
118028	I	230	48	4800	10 m. H07RN-F German type F CEE 7/7 protective-earth connection cord, loop-trough socket
118030	I	230	48	4800	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118031	I	230	48	4800	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118033	I	230	48	4800	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118034	I	230	48	4800	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118316	II	230	48	4800	5 m. H07RN-F connection cord with contour plug
118042	II	230	48	4800	5 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
118043	II	230	48	4800	10 m. H07RN-F connection cord with contour plug, loop-trough 0.5 m.
118486	III	24	48	4800	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118487	III	24	48	4800	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118488	III	24	48	4800	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118489	III	24	48	4800	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118491	III	42	48	4800	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118492	III	42	48	4800	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through 0.5 m.
118493	III	42	48	4800	5 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118494	III	42	48	4800	10 m. H07RN-F IEC 60309 ELV CEE connection cord, loop-through socket
118497	III	110 DC	48	4800	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118498	III	110 DC	48	4800	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through 0.5 m.
118499	III	110 DC	48	4800	5 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket
118500	III	110 DC	48	4800	10 m. H07RN-F IEC 60309 CEE connection cord, loop-through socket

\* preliminary data, light measurements not yet validated



Type	l x h x w	Weight*
TM 4000 G2	1080 x 122 x 122	4 kg



\* weight without cord

# Accessories

There is a sophisticated set of accessories available for every TubeMaster that simplifies the use and extends the application range.

For example, strong rubber-coated magnets to attach the luminaires to steel structures without damaging the surface.

A pendant luminaire conversion is available to suspend the fixtures above workplaces.

The replaceable polyester film is essential to protect the polycarbonate tubes during paint or blasting activities.

## Accessories and conversion set.



### Suspension brackets

- glass-fiber reinforced polyamide with rubber insides
- M10 threaded brass insert

### Galvanized steel protection and suspension brackets

- cable protection
- facilitates mounting with, for example, ty-raps

### Pendant luminaire conversion

- M6 eye bolt and square nut

### Magnet system

- neodymium for unprecedented pull strength
- rubber coated prevent slipping and scratching
- adapter M8-M10 for suspension brackets included

### Protective Film

- 0.2 mm crystal clear polyester with self-adhesive strip
- can be fitted without dismounting end caps

## Accessories overview

 117449	 118532 + 122323 + 118100
 118533	 118099
 107583	 117181




Article	Description
117449	polyamide suspension bracket with M10 brass insert
117540	spare adapter M10-M8
118533	neodymium magnet rubber coated M8-M10
118099	galvanized steel protection and suspension brackets
117181	M6 square nut pendant fitting conversion
107583	M6 eyebolt pendant luminaire conversion
118532	polyester protective film TM1500
122323	polyester protective film TM2500
118100	polyester protective film TM4000





Designed for use as  
rough service luminaire.

Your dealer

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For a current overview, visit [www.keraf.nl](http://www.keraf.nl)