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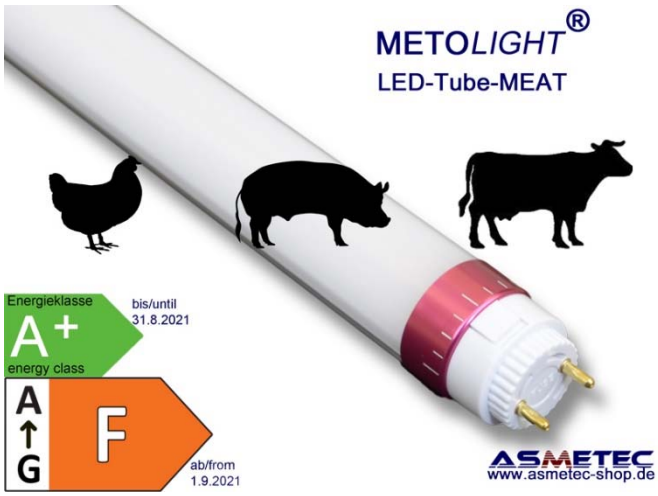
METO*LIGHT*® LED-Tube MEAT-Series

Color shades for Beef (RBW), Pork (P), Poultry (TR)

LED tubes of the MEAT series are specially developed to produce the goods exhibited in meat refrigerated counters in their true colors. They can be used directly in luminaires with magnetic ballast and starters without luminaire conversion. In the case of luminaires with ECG, however, this must be removed by a qualified electrician and the luminaire must be rewired. For this purpose, we recommend our adapter terminal Art.101606, with which the conversion can be done professionally in a few minutes.



The METOLIGHT® Meat series is available in the usual T8 lengths 60 / 90 / 120 / 150 cm. Special lengths are possible considering minimum quantities.

ASMETEC offers 3 different shades of pink colour in the LED MEAT tubes series.

METOLIGHT® Meat-RBW: The pink light is generated by 3 different LEDs (red, blue, white) and is optimized by the light spectrum for lighting dark meat such as beef. The highest brightness is emitted in the blue and red light spectrum.

METOLIGHT® MEAT-P: Here, the pink light is generated directly from individual specially coated SMD LED diodes. The colour intensity is lower than that of the RBW variant and is ideal for light meat such as pork. In comparison to the RGW variant, the red portion of the light spectrum is significantly reduced and sloping flatter.

METOLIGHT® MEAT-TR: As with the P version, the pink light is produced from specially coated SMD LEDs, whereby the colouring is somewhat lower. This colour is ideal for light poultry meat.

All LED tubes of the MEAT series are characterized by these special features:

- replacement for T8 / T10 fluorescent tubes 60 / 90 / 120 / 120 / 150 cm
- Up to 70% energy cost savings compared to conventional fluorescent lamps
- Single-sided safety contact - no danger of electric shock
- G13 swivel base, snap-in and fixable, can be rotated through 180°
- Double insulated, exchangeable power supply, power factor > 0.95
- Average service life up to more than 30,000 operating hours
- Full luminosity from the beginning without flickering or preheating, without 50 Hz flickering
- High shock and vibration resistance, largely unbreakable
- Free from UV light, only low IR light radiation - no bleaching of illuminated objects
- Aluminum core circuit board, heat conduction gel, aluminum support tube
- Minimal heat emission through high energy efficiency -> 120 lm / W
- CE, FCC and RoHS compliant, no hazardous waste, no mercury, no lead
- Energy class F
- Up to 2 years warranty (see warranty conditions)
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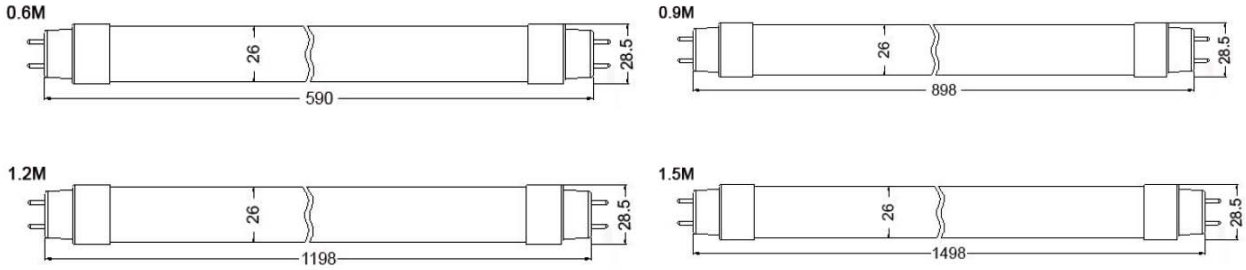
Quality inspection, measurement of phototechnical and electrical data, creation of light distribution curves according to IES is carried out in batches and, if required, also for each customer order in our own METOLIGHT® test laboratory at ASMETEC in Kirchheimbolanden.

Abmessungen



Technical Data

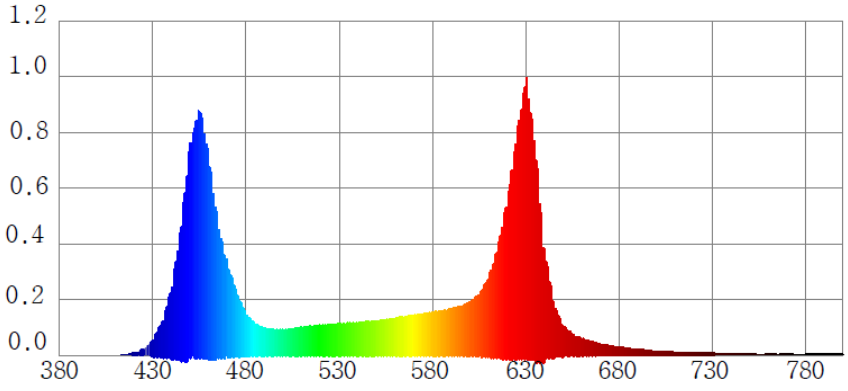
Typical values, typ. tolerance 5%

	60 cm	90 cm	120 cm	150 cm
Sizes				
Lenght – Body	590 mm	898 mm	1198 mm	1498 mm
Lenght – with Pin	595 mm	902 mm	1206 mm	1505 mm
Lenght – total	610 mm	910 mm	1210 mm	1510 mm
Diameter tube	25,6 mm			
Diameter socket	26,5 mm			
Weight	220 g	290 g	320 g	380 g
Lighttechn. Data				
lumen (RBW) - beef	700 lm	1100 lm	1400 lm	1700 lm
lumen (P) - pork	800 lm	1250 lm	1650 lm	1950 lm
lumen (TR) - poultry	900 lm	1400 lm	1900 lm	2200 lm
Qty LEDs	72	84	144	680
Efficacy	> 120 lm/Watt LED Effizienz (Base white)			
Color rendering	CRI Ra > 80			
Life time	L70B10 > 30.000 h for LED			
Beam angle	120°			
Light colour	Pink (Varianten je Typ)			
Available sheells	matted (M) (optional clear)			
Electr. Data				
Input voltage	100 – 265 V AC			
Frequency	50 / 60 Hz			
Power*	10 W	15 W	20 W	25 W
Input Current (230V)	< 0,04 A	< 0,07 A	< 0,086 A	< 0,11 A
Power factor	Pf 0,95			
Isolatio9n voltage	> 2500 V			
Switch cyclest	> 100.000			
Protection	Obver temperature, Over voltage			
Energy class	**F / EEI 0,13**			
Dimmable?	No			
Working conditions				
Ambient temperature	-20°C - +40°C			
Storage temperature	-25 - +60°C			
Rel. Humidity	< 90 rH			
Protection class	IP20			
Complies with	EN 62776:2015, EN 62493:2015, EN 62471:2008, EN 55015, EN 60598-1:2008, EN 61000-3-2, EN 61547:2009, EN 62321:2001			
Complies with	CE, RoHS			
Notes 	Use only in dry indoor areas Do not operate in hermetically sealed lights Do not operate on dimmers Installation only in voltage-free condition Operate on KVG / VVG only with LED starter Not suitable for electronic ballast (electronic ballast) Not resistant to alkaline cleaners Do not use in an alkaline environment			

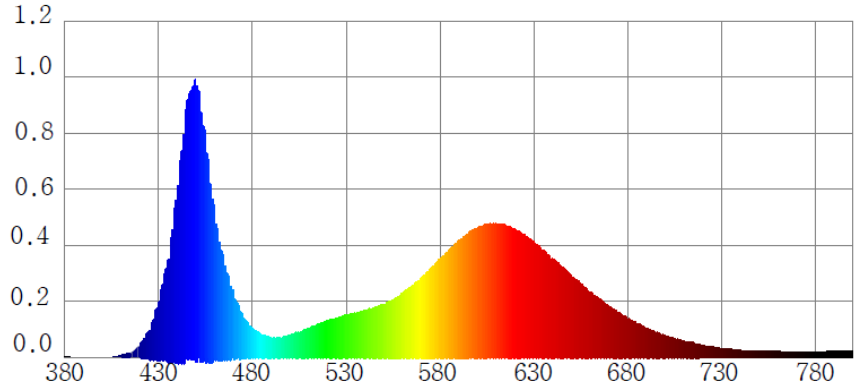
Rotatable, snap-in bases - ideal for precise light alignment
Push the plastic lock to the front -> turn the base -> push the lock back

Note: For each type of our LED tubes we produce technical data sheets with light and electrical data as well as light distribution curves for use in e. g. DIALUX for light calculation.

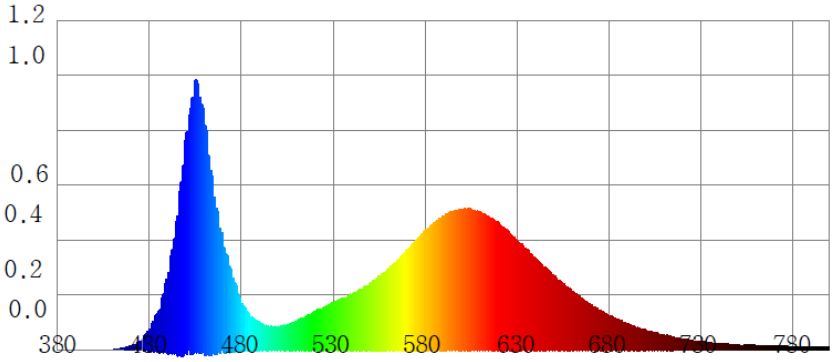
METO*LIGHT*® **MEAT-RBW**: The pink light is generated by 3 different LEDs (red, blue, white) and is optimized by the light spectrum for lighting dark meat such as beef. The highest brightness is emitted in the blue and red light spectrum.



METO*LIGHT*® **MEAT-P**: Here, the pink light is generated directly from individual specially coated SMD LED diodes. The color intensity is lower than in the RBW variant and optimal for light-colored meat, e.g. Pork suitable. In comparison to the RGW variant, the red component in the light spectrum is significantly reduced and shallower.

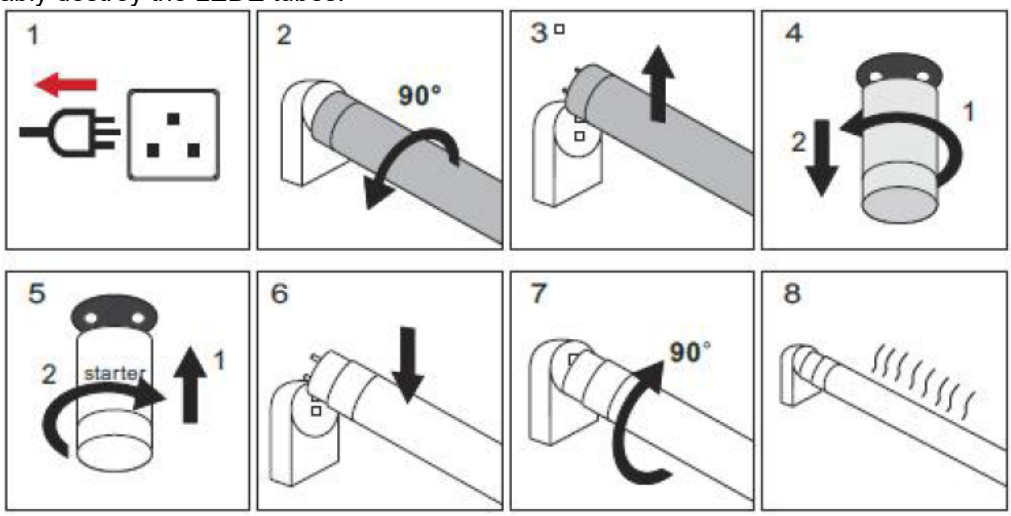


METO*LIGHT*® **MEAT-TR**: As with variant P, the pink light is produced from specially coated SMD LEDs, whereby the colouring is somewhat lower. This colour is ideal for light poultry meat.



Installation instructions for luminaires with ballast and starter

- The MEAT LED tubes are intended only for luminaires with ballast / ballast and starter, as well as for luminaires specially prepared for LED tubes.
- Do not operate in luminaires with ECG and / or dimmer switches.
- Do not make any technical changes to the luminaires.
- The LED tubes cannot be used for all applications in which fluorescent tubes were previously used (e. g. hazardous areas, EL areas, limited temperature range).
- If you have any questions, please contact Asmetec GmbH
- The LED tubes are suitable for general lighting tasks.
- **Never install LED tubes while the luminaire is switched on**. The overtensioning of the ballasts can irreparably destroy the LEDE tubes.



1. Power-off the luminaire
2. Turn the fluorescent tube 90 °
3. Remove the fluorescent tube
4. Remove the fluorescent tube starter
5. Insert the LED starter and turn it by 90 °
6. Insert the METOLIGHT® LED tube type MEAT (mounting direction does not matter) (If necessary, pull out the end caps a little and turn, then insert the LED tube again)
7. Turn the LED tube by 90 °.
8. Power on the luminaire

Troubleshooting (LED tube not lit)
Power supply, G13 sockets, overall luminaire OK?
Is the LED tube and LED starter used correctly?
Test the LED tube into another light. If the tube lights up there, the cause of the defect in the first lamp must be cultivated. If the tube does not light up there, the error is probably in the LED tube, then please return it to Asmetec.

ASMETEC has its own light measurement technology with 3 integrating spheres, goniophotometer and IES-compliant black space. We even carry out EMC measurements in our own laboratory

Examples of energy class labels 120 cm: