

Examination light marLED® E3



Item no. 89-700-02-04 (without ceiling tube and canopy)

1 Mechanical design

KLS Martin examination light in LED technology. The ceiling tube, which has a diameter of 42 mm, is delivered according to room height (to be ordered separately).

The ceiling tube carries the maintenance-free suspension arm system with the light head mounted in place (depending on configuration also available as wall mount or mobile version). Unrestricted movability is guaranteed by stop-free rotary joints and the cardanic suspension. The light head made of high-strength and impact-resistant plastic (PC/ABS) is completely closed and dust-tight. This ensures excellent resistance to mechanical stress.

2 Light system

Optimal illumination is guaranteed by the innovative and highly efficient LED light system. The specially developed optical multi-lens system offers cold, white and shadow-free light. Excellent light properties and best color rendition are guaranteed by the use of high-quality LED technology. The light exit surface is made of special, highly scratch-resistant plastic to ensure high resistance to mechanical as well as chemical impact.

We reserve the right to make alterations

Due to manufacturing and measuring tolerances, all data relating to lighting systems has a tolerance of +/- 5%.



3 Operation

The ON/OFF and brightness control buttons are ergonomically integrated into the light head in the form of a seamless, flush-mounted membrane keypad. Together with the smooth surface of the light head, this enables fast cleaning and wiping disinfection. To ensure easy positioning, the light head features an integrated handle. This handle component can be easily replaced with one of the following handle versions at the user's choice.

Optional handle elements:

Option 1: Sterilizable Handle

Option 2: Handle for Sterile Disposable Cover

Optional handle elements	Illustration	Item no.
<p>Option 1: Light equipped with sterilizable handle for sterile operation.</p>		<p>89-700-05-04 Handle adapter and 2 x sterile handle</p>
<p>Option 2: As an alternative, the light can be equipped with handle elements for the use of disposable handle covers.</p>		<p>89-940-02-04 Handle for sterile covers</p> <p>89-940-20-04 Sterile covers (100 pcs.)</p>

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Electrical Data		marLED® E3
Power module		integrated into light head
Supply voltage, primary	V	100 – 240 VAC, 50 – 60 Hz
Power input, entire light head	VA	32
Power input, light sources	W	3 x 5
Voltage available at point of wall- or ceiling-mounting	V	100 – 240 VAC
Effective service life of light sources	h	40,000
Voltage stabilization (electronic)		yes
Focus / light field adjustment		fixed
Starting performance		last setting
Automatic switch-over to standby light source		not required, 3 light sources available
Spare light sources		available from KLS Martin
Electronic system meets requirements acc. to		VDE/IEC
Classification acc. to MPG (Medical Devices Act / MDD)		I
Protection class acc. to IEC 601		I
Degree of protection: suspension system		IP30
Degree of protection: light head		IP42
Conformity		CE

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Photometric Data		marLED® E3
Central illuminance, electrically dimmable from/to	%	30 – 100%
Central illuminance at a distance of 1 m	lx	60,000
Light field diameter (d10, distance 1 m)	mm	150
Light field diameter (d50, distance 1 m)	mm	85
Color temperature	K	4,500
Color rendering index (CRI) [Ra(1 – 8)]		95
Illumination depth (without refocusing) L1 / L2	mm	300/400
Working range from/to (without refocusing)	mm	700 – 1400
UV irradiance for wavelengths < 400 nm	W/m ²	3

Mechanical Data		marLED® E3
Force required for moving light head up / down	N	8
Force required for swiveling the light head	N	2
Max. vertical force due to weight	N	98
Single weight (approx.): light head	kg	approx. 2
Torque, bending moment	Nm	65
Permissible ambient temperature range during operation	°C / °F	-5° to +40°C [23 – 104°F]
Storage temperature	°C / °F	-5° to +50°C [23 – 122°F]
Shock / impact resistance		8 g / 10 ms
Vibrostability (immunity to vibration)		10 – 150 Hz / 0.15 mm / 2g
Number of castors	pcs	none
Number of lockable castors	pcs	none
Castor diameter	mm	none
Light head flow contact area	cm ²	data to follow soon
Light head height (w/o sterile handle)	mm	approx. 85
Light head dimensions	mm	approx. 300 x 310

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Additional components required:

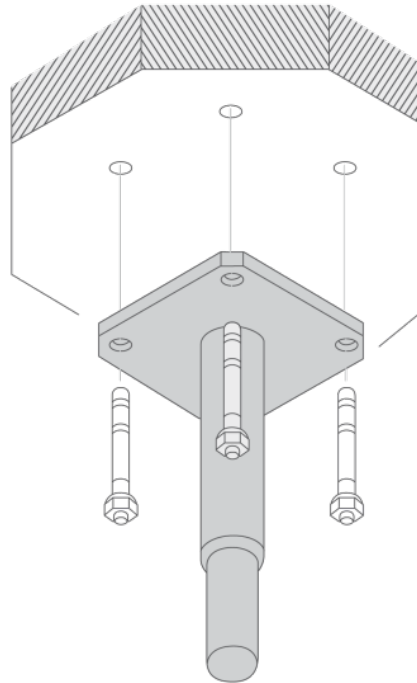
- ceiling tube (length acc. to room height)
- canopy (as ceiling flange cover)

4 Selecting the ceiling tube

Ceiling height CH from ... to (in mm),		Ceiling tube length L (in mm)	Item no.
2400	2452	210	89-972-70-04
2453	2502	260	89-972-71-04
2503	2602	360	89-972-72-04
2603	2702	460	89-972-73-04
2703	2802	560	89-972-74-04
2803	2902	660	89-972-75-04
2903	3002	760	89-972-76-04
3003	3102	860	89-972-77-04
3103	3202	960	89-972-78-04
3203	3302	1060	89-972-79-04
3303	3402	1160	89-972-80-04
3403	3502	1260	89-972-81-04
3503	3602	1360	89-972-82-04
3603	3702	1460	89-972-83-04
3703	3802	1560	89-972-84-04

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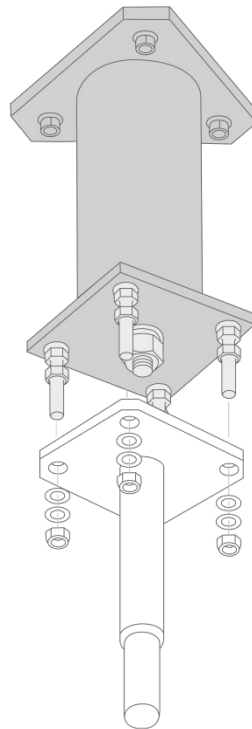


5 Intermediate Ceiling Assembly

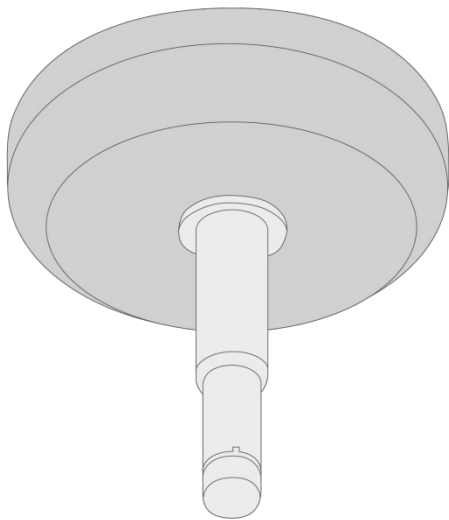
Dimensions (in mm)	Item no.
200	89-965-02-04
300	89-965-03-04
400	89-965-04-04
500	89-965-05-04
600	89-965-06-04
700	89-965-07-04
800	89-965-08-04
900	89-965-09-04
1000	89-965-10-04
1100	89-965-11-04
1200	89-965-12-04
1300	89-965-13-04
1400	89-965-14-04
1500	89-965-15-04
1600	89-965-16-04
1700	89-965-17-04

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6 Canopy

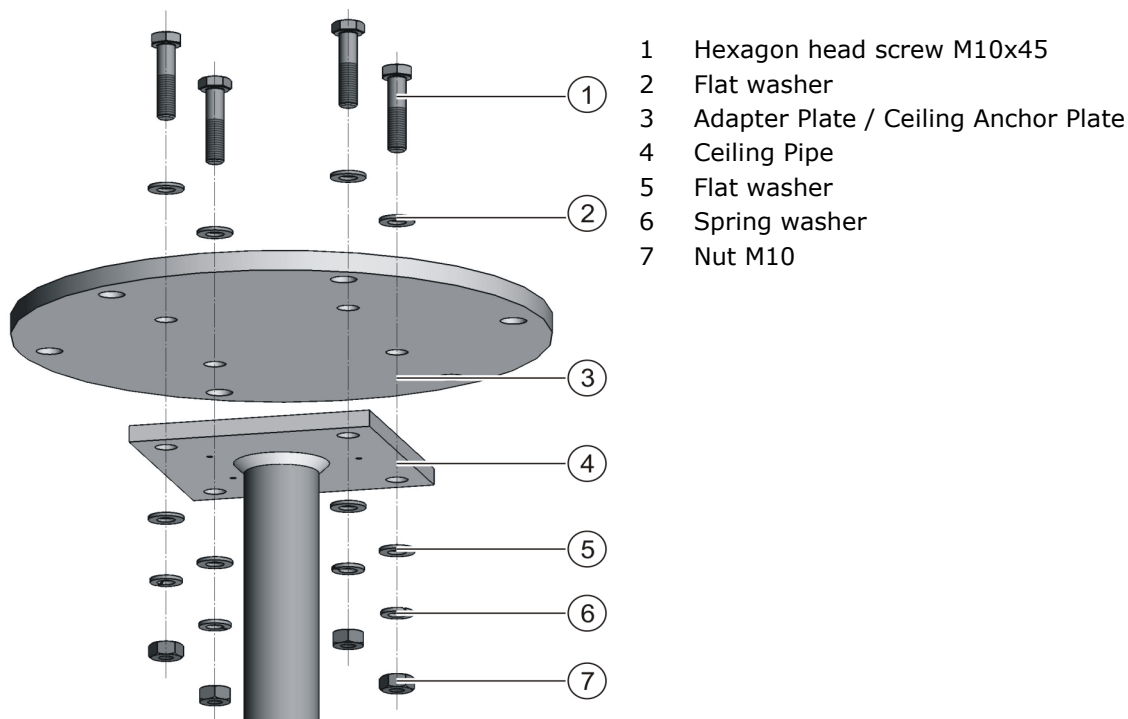


Item no. 89-700-04-04, 360 x 105 x 42 mm

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7 Assembly of Ceiling Tube 42mm to Ceiling Anchor Plate TK 270mm



Item no. 89-513-00-04 marLED® E3 Adapter plate for CAP/ICA

Manufacturer: Gebrüder Martin GmbH & Co. KG

Type: marLED® E3

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