

RANGE OF PRODUCTS

233154 KLQ750LQ-N LED LIGHTSOURCE Ø4.25/8500K

233393 KLQ750LQ-N LED lightsource Ø4.25/3000K

233394 KLQ750LQ-N LED lightsource Ø4.25/7000K

233258 KLQ750LQ-F LED lightsource Ø4.25/8500K/feedback

232982 KLQ750CO controller temp/intensity/feedback/24V/USB/RS622/analog trigger



KEY FEATURES @8500K

- High brightness with over 170klux*
- Overheating protection
- Lifetime > 15000 hrs
- Dimmable on device or via USB / serial
- Power supply 24VDC
- Strobe rate up to 35kHz (50% duty-cycle) @ 100% Brightness via 24V trigger input or LVDS
- Separation between LED unit and control unit

* Measurement: 1m glass fibre-optic, Ø4.25mm active, 50mm distance, 170klux

CHARACTERISTICS

Fibre Light emission, ActiveØ OUT	Ø4.25, max. Ø15mm
Power supply	24V@6A
Power consumption (at 24V)	120W
Life span in continuous mode	>20.000h
Type specification	
Kelvin	3000°K, 7000°K, 8500°K
Spektrum	400-729nm
Dimmable	5-100%
Controllable	LVDS*, RS622*, RJ45, USB / RS232 *potentiality free
Trigger Voltage	24V analog, input current <100mA
Time of oscillation	min. 50µsec.
Response time ON	max. 5µsec.
Response time OFF	max. 5µsec.
Triggertime	min. 4µsec. at 100% light on (ca.35kHz)
Cablelength:	
Lightsource-Controller	max. 9m
Axial flow fan	<16dBA

PLEASE

Read this manual completely before using these products.

CAUTION

In order to avoid the risk of fire or electric shock do not expose this apparatus to rain, humidity or heat!

WARNINGS

Looking directly at operating LED can cause permanent eye damage !

Do not operate LED without a light guide connected to LED unit !

Do not remove light guide without turning off light source !

PRECAUTIONS

1. Isolate cold light source from supply distribution before repair and maintain work.
2. To avoid electric shocks never remove screws or coverings.
3. Maintenance work should only be carried out by qualified service technicians.
4. Handle the cold light source with care. The cold light source always has to be handled carefully.
5. Avoid rain or humidity, do not use the cold light source at wet places. When the cold light source gets wet, immediate actions are necessary. Switch off the power supply and have it maintained by a service technician. Humidity can damage the cold light source and can lead to electric shocks.
6. Do not use the cold light source beyond the prescribed areas of temperature, air humidity and power supply.
7. Only use it indoor
8. Ambient temperature must be in the area between 0° C and +30° C
9. Do not use the cold light source when air humidity is over 90%
10. For input power supply see technical characteristics on last page

PREFACE

We developed the cold light source in order to attach glass optical fibre applications.

ADAPTATION OPTIONS

Light source is used with fibre-optic.

There are several adaptation options available for example:

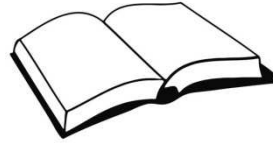
- line lights
- ring lights
- spots

PURCHASED PARTS PACKAGE

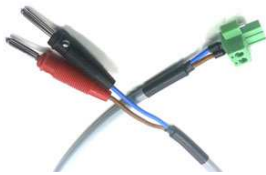


232982
KLQ750CO controller

233154
KLQ750LQ-F LED lightsource



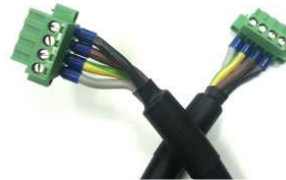
Instructions
manual



233348
KLQ750 cable
24V main-power



233349
KLQ750 cable
sensor supply



233350
KLQ750 cable
LED power

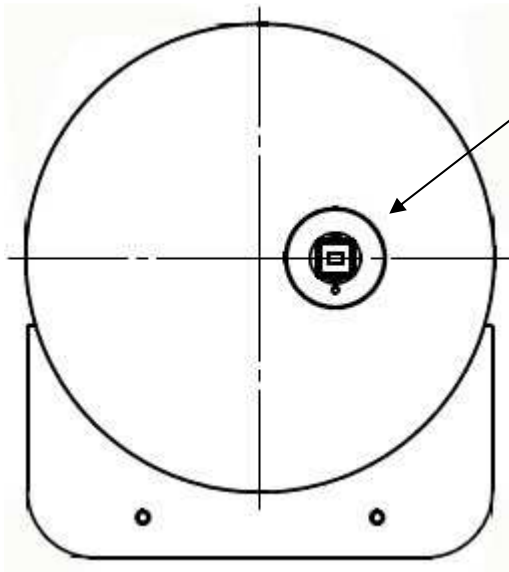


233351
KLQ750 cable
24V BNC trigger input

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CONNECTORS LED UNIT, FRONTSIDE

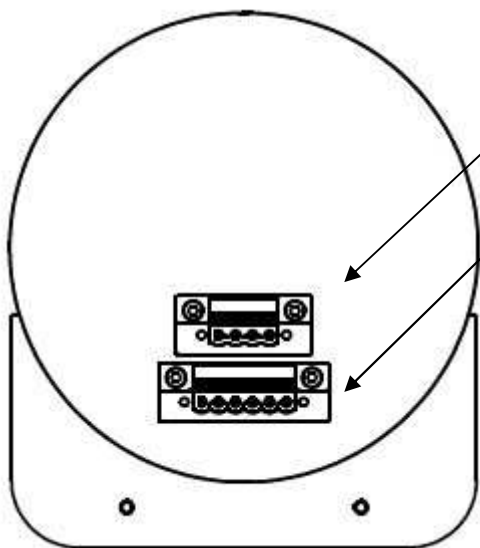


Light output fibre-optic

WARNINGS

- Looking directly at operating LED can cause permanent eye damage !
- Do not operate LED without a fibre- optic connected to LED unit !
- Do not remove fibre-optic without turning off light source !

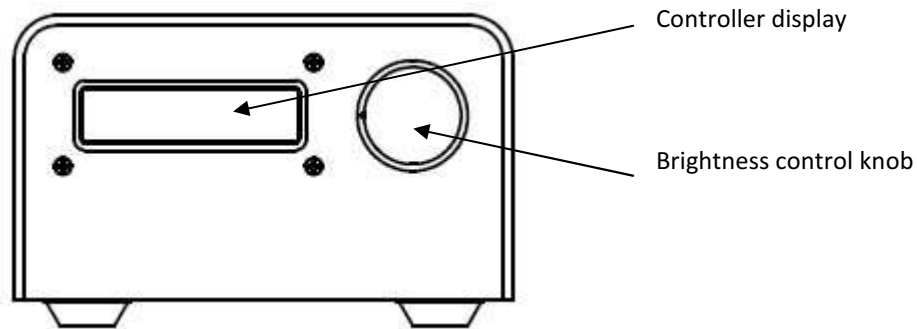
CONNECTORS LED UNIT, BACKSIDE



Supply for LED, 4-PINS

Sensor signals from LED unit, 6-PINS

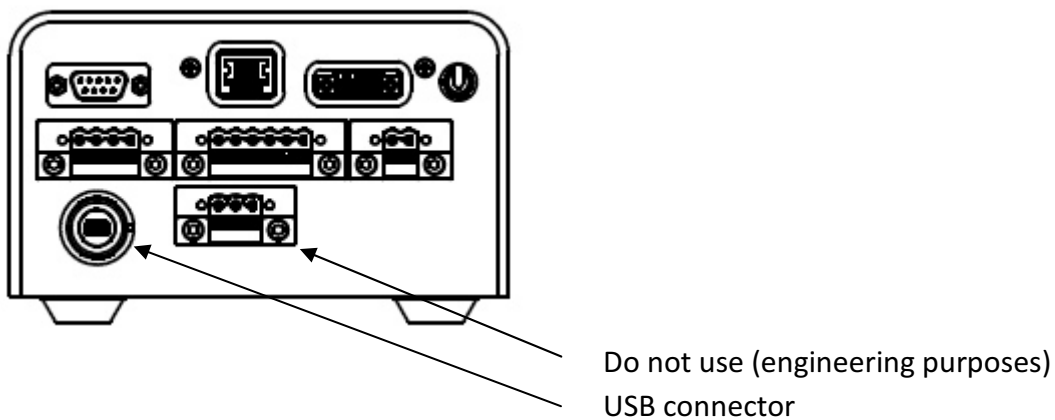
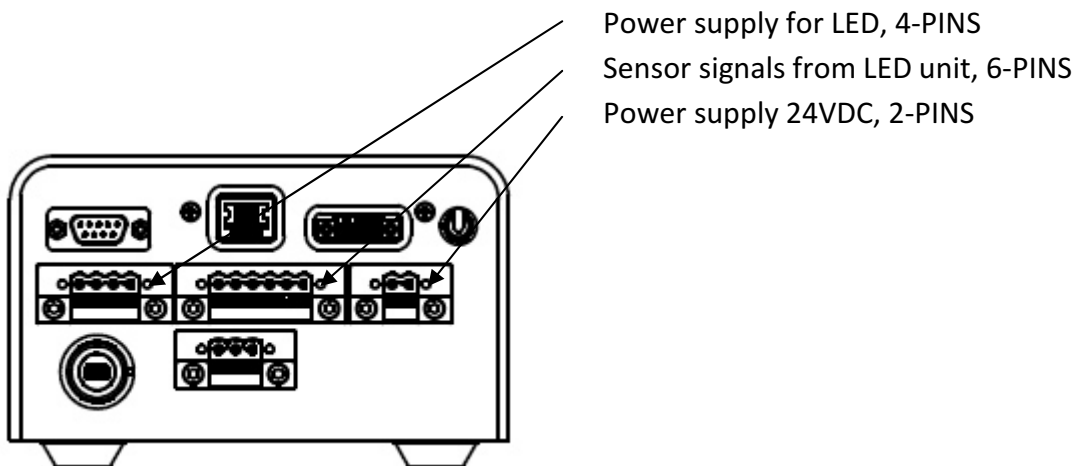
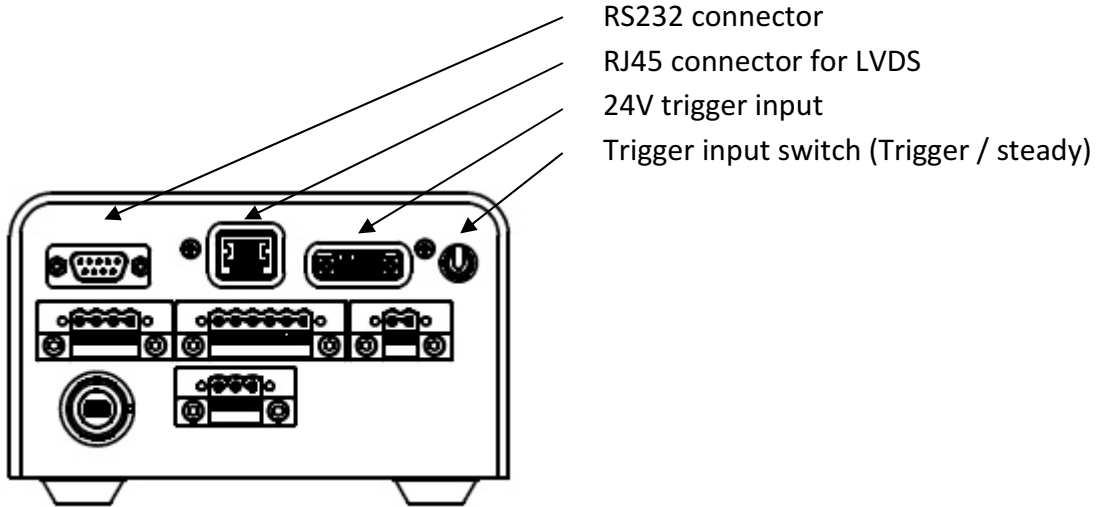
CONNECTORS CONTROLLER, FRONTSIDE



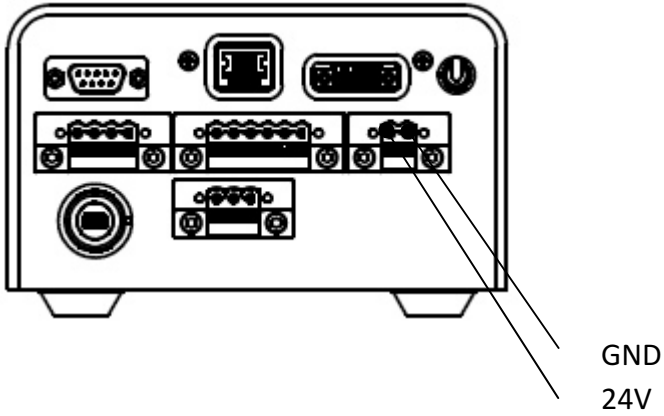
The controller display shows:

- target intensity in percent
- actually measured temperature at the LED board

CONNECTORS CONTROLLER, BACKSIDE



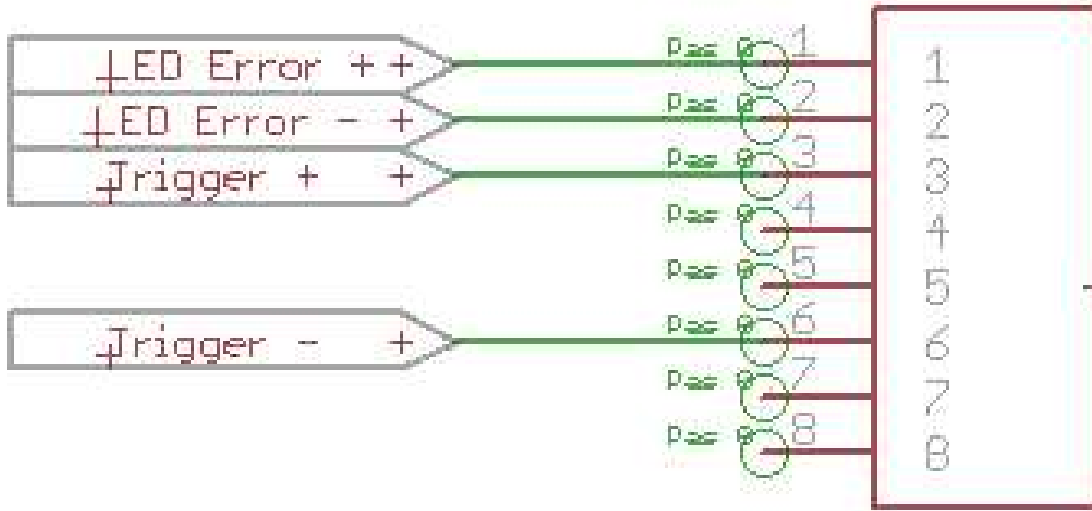
POWER SUPPLY 24VDC (2-PINS)



USB AND RS232 COMMANDS

Command	Description
SET_BGH	<p>Set the brightness of the light source. Before using this function first set potentiometer off.</p> <p>Example: SET_BGH 0 = 0% SET_BGH 100 = 100%</p>
GET_BGH	<p>Read the actual brightness from the light source</p> <p>Example: GET_BGH Answer: SOLL 95 (=95%)</p>
GET_TMP	<p>Read the actual temperature from the LED</p> <p>Example: GET_TMP Answer: TEMP 65 (=65°C)</p>
SET_DSP	<p>Set Display on or off</p> <p>Example: SET_DSP 0(zero) = off SET_DSP 1 = on</p>
OK	Transmitted when command was successfully detected
SET_POT	<p>Turn on or off the potentiometer. Is needed on USB/RS232 function. Otherwise the controller uses the value of the potentiometer.</p> <p>Example: SET_POT 0(zero) = off SET_POT 1 = on</p>
ERR	Transmitted when command was not successfully detected
LED_HOT	Transmitted when LED is on over temperature

LVDS RJ45

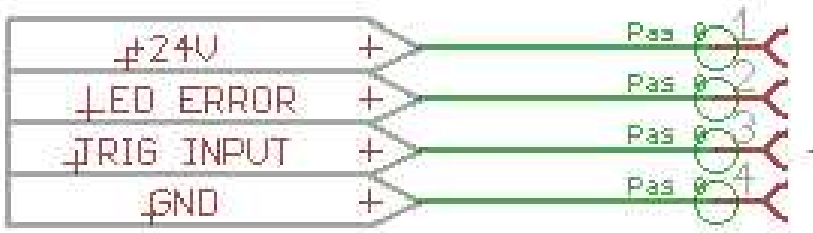


Pin	Definition
1,2	Output - HIGH on LED overheats
3,6	Input – HIGH LED on

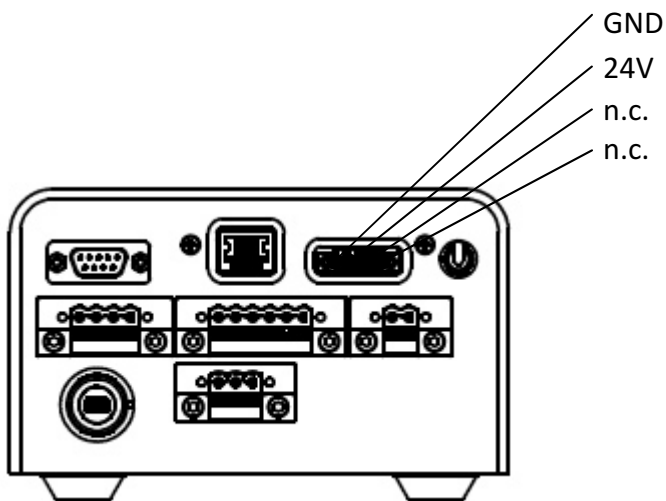
LVDS SPECIFICATION

Parameter	Min	Typical	Max	Unit
Differential Output	250	355	450	mV
Output High Voltage		1.4	1.6	V
Output Low Voltage	0.90	1.1		V
Offset Voltage	1.125	1.2	1.375	V
LVDS Input High Threshold			+100	mV
LVDS Input Low Threshold	-100			mV
Input Current	-10	±1	+10	µA

24V TRIGGER INPUT (4PIN CONNECTOR)



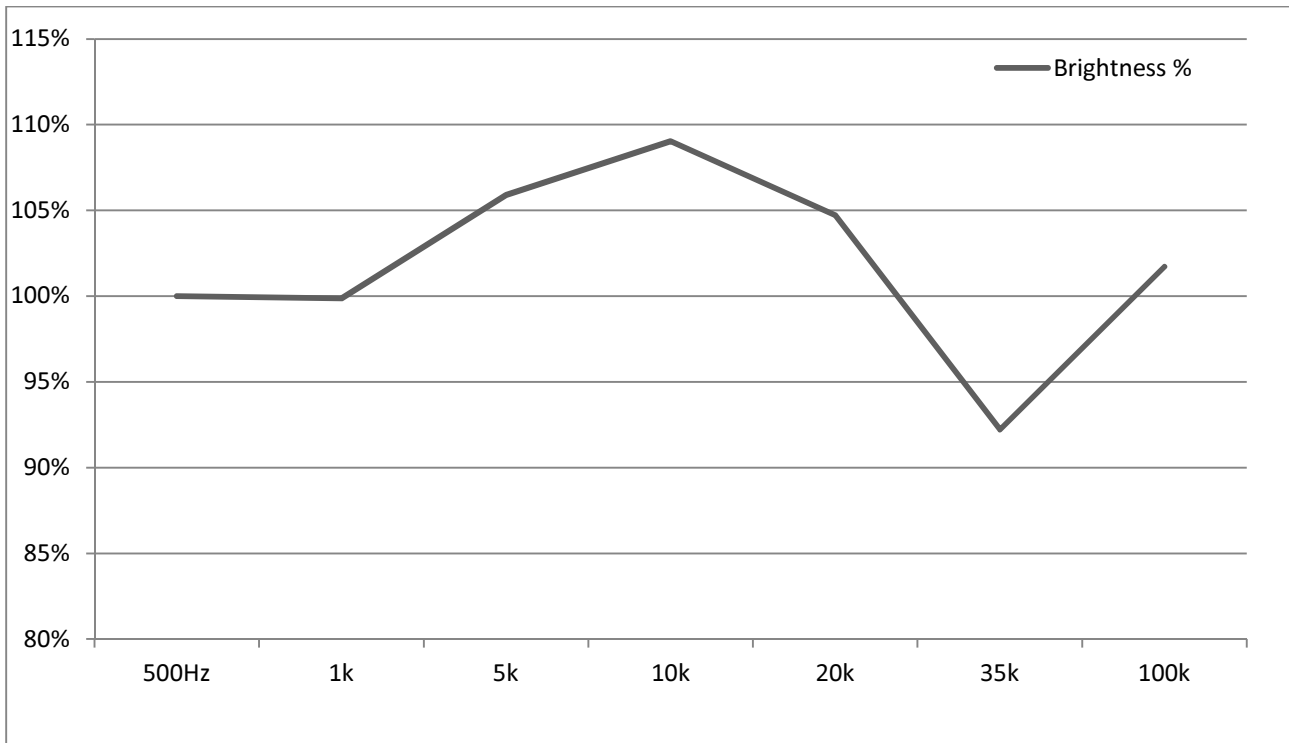
Pin	Definition
1	VCC
2	Output LED Error
3	Input LED Trigger ON/OFF
4	VSS



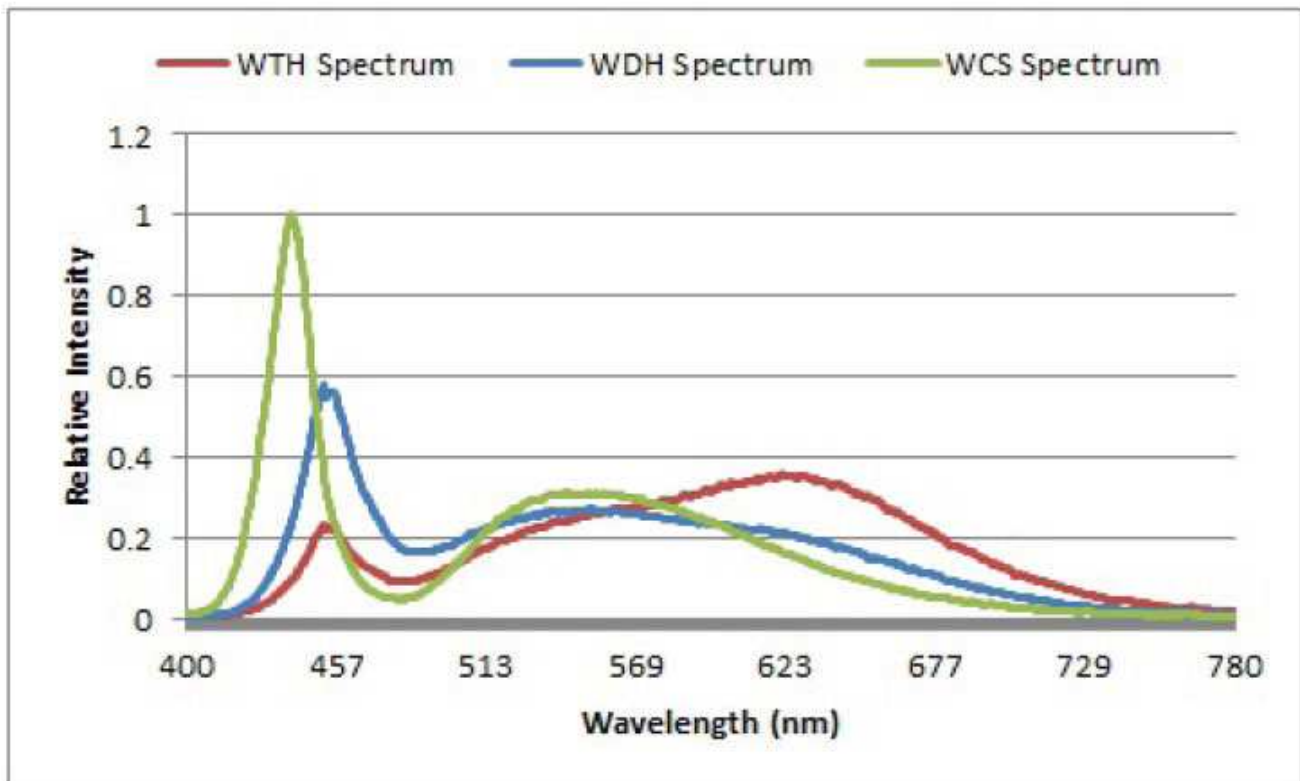
24V TRIGGER SPECIFICATION

Parameter	Min	Typical	Max	Unit
Input Voltage	22	24	26	V
Output Voltage	22	24	26	V
Input Current			100	mA
Output Current		25		mA
ON Delay (triggered)		5		μ s
OFF Delay (triggered)		5		μ s
LED ON (triggered)	4			μ s

FREQUENCY VS. BRIGHTNESS (DUTY CYCLE 50%)



LED SPECTRUM



LED TYPE

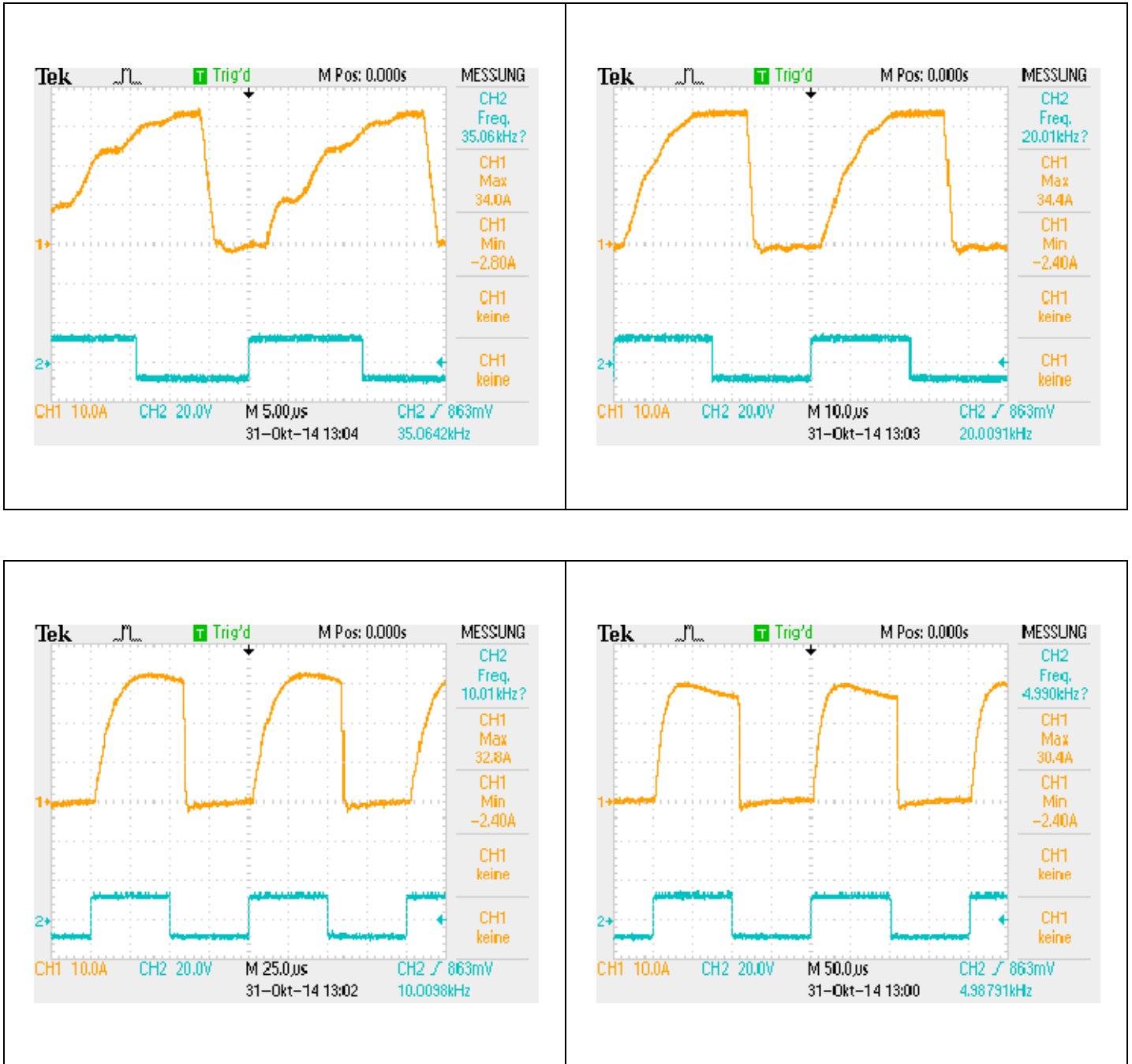
Type	Color Rendering Index Typical Values	Color Temperatur	Part.no.
WTH, Tungsten White	CRI 92	3035K	233148
WDH, Daylight White	CRI 92	7000K	233395
WCS, Cool White	CRI 75	8500K	233147

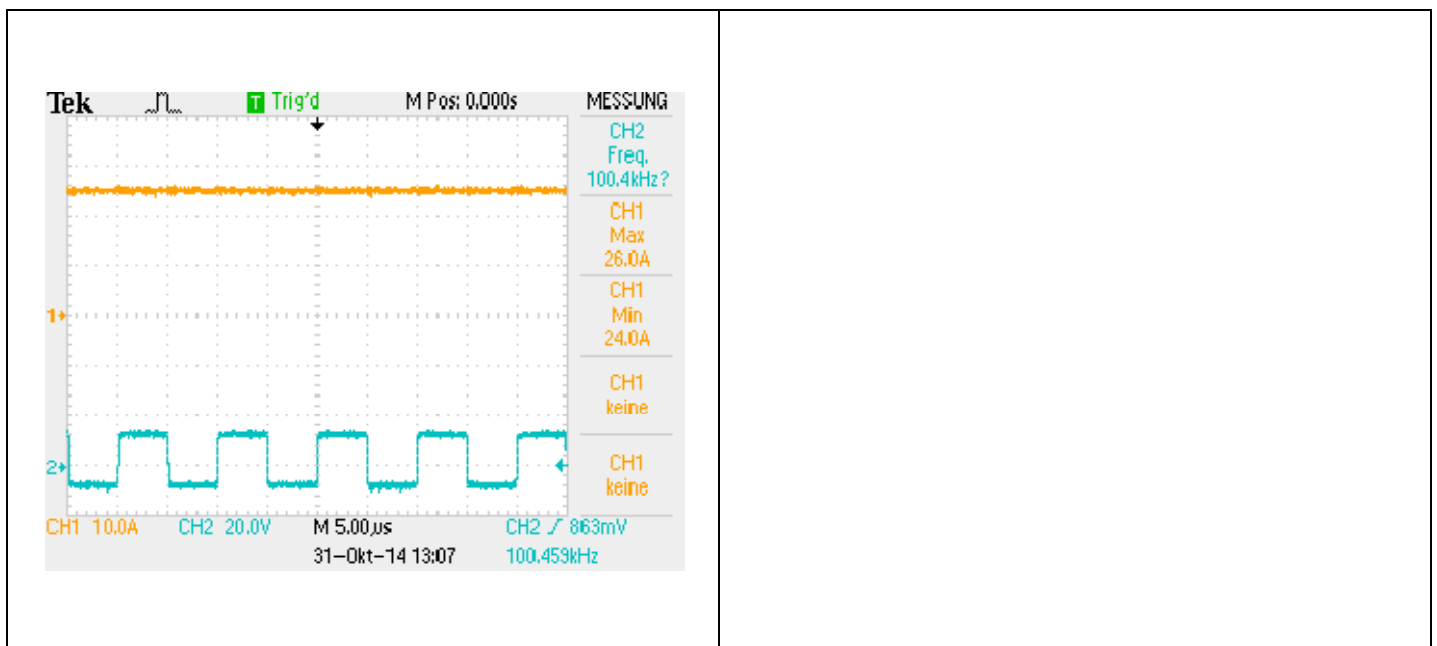
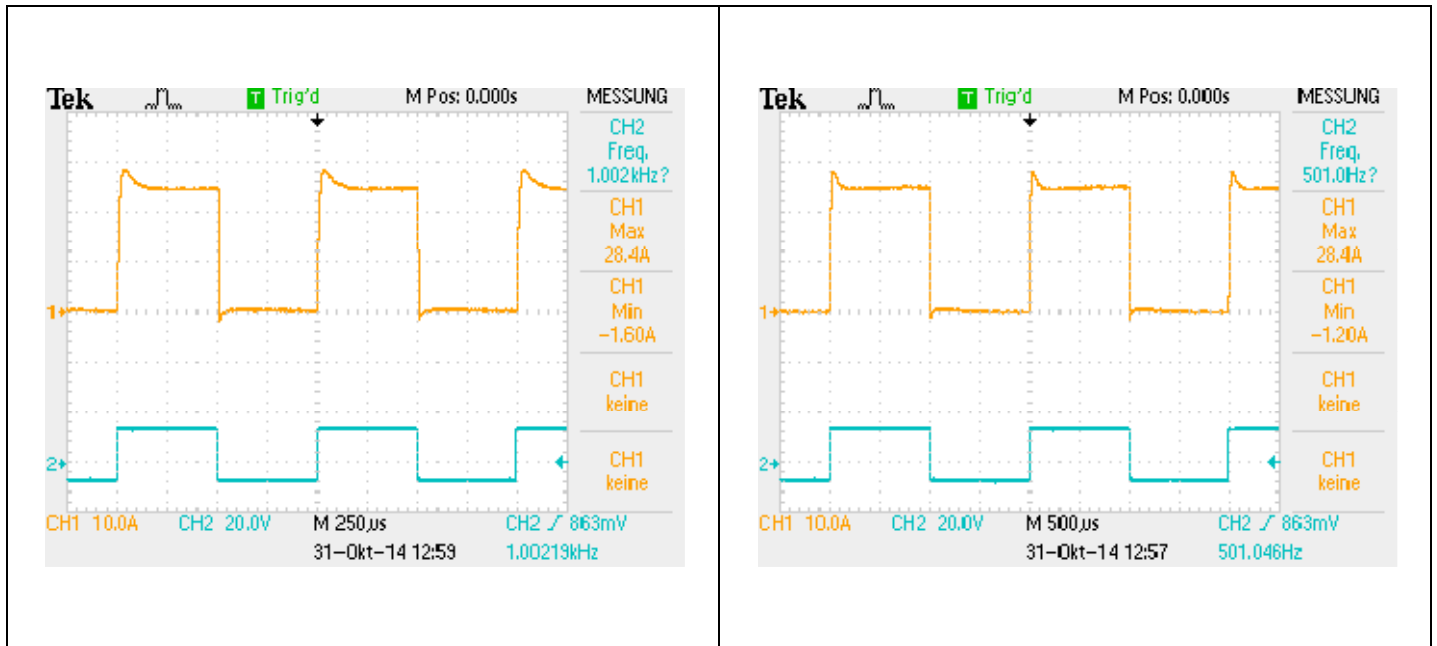
TECHNICAL CHARACTERISTICS

Parameter	Min	Typical	Max	Unit
Supply voltage	22	24	26	VDC
Power consumption			120	W

Operating temperature	0°C to +30°C
Storage temperature	-30°C to +70°C
Controller dimensions	BxHxT 149x92x221mm
Controller weight	1.3kg
Controller cooling	28.5 dBA, active fan
LED unit dimensions	BxHxT 140x160x187mm
LED unit weight	2.6kg
LED unit cooling	0.8 Sone, active fan

DISCHARGE CURVE





! We reserve the right to modify technical data/specifications of the product described at any time without previous notification. During compilation the manual we worked with the greatest precision and care. Though there may arise deviations as a result of later product modifications. Please contact us, if you need more information or detailed specifications .

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