



ClimatePartner
Klimaneutral
gedruckt

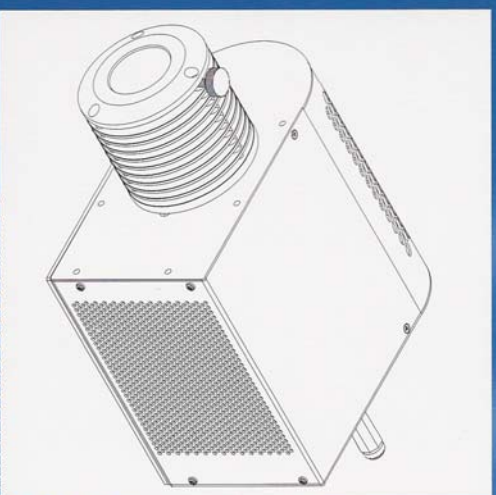
10282 e USA 10101.0 bg/rm Printed in Germany/Version November 2010

SCHOTT North America Inc.
Lighting and Imaging
122 Charlton Street
Southbridge, MA 01550
USA
Phone: +1 (508) 765-3235
Fax: +1 (508) 764-7361
LSOinfo@us.schott.com
www.us.schott.com/architecture

SCHOTT
glass made of ideas

SCHOTT Spectra™ LED Light Source 100W

User Manual



SCHOTT
glass made of ideas

SCHOTT Spectra™ LED Light Source 100W

Contents

1. Important information	2
1.1 Models covered by this manual	2
1.2 System description	2
1.3 Safety information	2
2. Light source installation	3
2.1 Mounting orientation and fixing	3
2.2 Ventilation	3
2.3 Electric installation	3
3. Harness installation	4
3.1 The basic rules of handling fiber optic cable	4
3.2 Connecting the harness to the light source	4
4. Operation	4
5. Maintenance	4
5.1 Thermal trip	4
6. Troubleshooting/Fault diagnosis	5
7. Service and repair	5
8. Transport, storage and disposal	5
9. Technical specifications	5
10. Article numbers and accessories	6

1. Important information

The manufacturer accepts no liability for the damage, personal injury or damage to other materials howsoever caused, resulting from the failure to comply with these instructions.

WARNING: RISK OF FIRE

Do not attempt to use plastic optical fiber harnesses with any SCHOTT Spectra™ LED Light Source 100W which is designed for use with glass fiber harnesses.

Please take particular care that the SCHOTT Spectra™ LED Light Source 100W is used with the correct SCHOTT specified DC power supply.

1.1 Models covered by this manual

These instructions cover the installation and use of SCHOTT Spectra™ LED Light Source 100W and harnesses. The models covered are shown at the back of this manual.

1.2 System description

The SCHOTT Spectra™ LED Light Source 100W showcase system has been developed for displays and showcases in retail, museum and exhibition markets. System components are designed to be built in by showcase manufacturers.

The system is not suitable for hazardous, wet or excessively dusty locations. Consisting of a fiber optic harness and LED light source, the system offers many advantages over conventional lighting. As that harness provides multiple points of light, it gives bright and even illumination over the entire area of the showcase, virtually eliminating visible shadows. It also adds a 'sparkle' to merchandise such as jewellery, watches and cut glass as the numerous points of light produce multiple spot reflections. All the points of light are generated from one light source making the system extremely simple to maintain. A general characteristic of glass fiber optic lighting is that the transmission of ultraviolet light is significantly reduced by the glass fiber. Also, due to the separation of the light source and the light output the display area remains cool and unaffected by the heat generated by conventional lighting. The SCHOTT Spectra™ LED Light Source 100W system can be used in close proximity to display materials that might suffer damage when exposed to conventional lighting.

SCHOTT Spectra™ LED Light Source 100W

The light source has been specially designed to be installed in showcases and displays and incorporates many features to reflect this. Due to the long lifetime of the LED (given by the careful heat control) there is no need for lamp change. The low noise of the cooling fan also allows the SCHOTT Spectra™ LED Light Source 100W system to be installed in sensitive environments e.g. museums and galleries.

1.3 Safety information

Please read the instructions carefully and adhere to them at all times. The safety of the system cannot be guaranteed if the instructions are not followed. Ensure:

- the positioning of the light source with the showcase incorporating sufficient ventilation.
- the light source is fitted in a manner that no electrical danger is presented to users or the public.

CAUTION

Risk of damage to eyes! Do not look directly into the light source.

2. Light source installation

When used in a showcase, the showcase design and the final installation location of the light source should be such as to prevent access by the general public or other unauthorized persons.

2.1 Mounting orientation and fixing

Please make sure that the light source is secured to the showcase cabinet either by means of the four screw holes provided in the base or by the screw holes provided in the (optional) side mounting brackets as shown in the drawings. The installation is in non wet dust free area.

The light source may be mounted horizontally, vertically, or any angle in between. The mounting plate on the bottom of the light source has four through holes (M4 x 0,7) for fixing the unit to wood, masonry, drywall, or metal.

Note if the light source is fitted with the open ventilation ports upwards care must be taken to ensure that dust, foreign bodies etc. do not fall into the unit.

Fitting the light source with the exhaust vent downwards is not recommended as the exhaust air will flow over the unit and may cause it to run too hot.

When fitting the light source in the showcase it is important to note that the power switch and the dimming control knob should be accessible for the staff, and it may also be necessary to prevent access by members of the public.

2.2 Ventilation

CAUTION

The distance between the exhaust vent and a non ventilated surface should not be less than 50mm (1,97").

Insufficient ventilation within a showcase may cause the light source to run hot (shortening the lifetime of the light source) and the thermal trip will operate.

Ensure the airflow in and exhaust airflow are well separated.

The unit must be ventilated. Do not block the vent holes.

Do not locate the light source next to any heat source.

The light source incorporates fan assisted forced air-cooling with the "warm" exhaust air leaving the unit via the exhaust vent on the curved surface of the unit. It is important that sufficient cooling air is available and that the exhaust air from the light source is able to exit and not be recirculated back into the air inlet. Ideally the exhaust vent should be positioned in close proximity to the showcase ventilation aperture thereby allowing the "warm" air to be expelled from the cabinet. Similarly it is desirable that the inlet air is drawn from outside the showcase.

2.3 Electrical installation

To meet CE regulations the power supply must be an EN61000-3-2 class C power supply with a power rating of at least 4 Amps at 24 VDC

To meet UL safety requirements, the light source must be supplied by either a UL 1310 listed class 2 power supply, or a UL60950 Class 1 power supply.

The lighting system including the power supply should be installed in such a way as to prevent access to the electrical connections by the general public or other unauthorized persons. The light source and power supply must be connected in accordance with IEE and local regulations. The light source electrical power can be isolated easily in accordance with local regulations.

3. Harness installation

3.1 The basic rules of handling fiber optic cable

Fiber optic cable should be treated with care. It should not be:

- Stepped upon or crushed
- Bent beyond its natural bending radius
- Placed under excessive tension
- Subjected to adverse weather conditions
- Immersed in water
- Subjected to extremes of temperature or humidity.
- Exposed to chemicals or solvents.

3.2 Connecting the harness to the light source

Push the common end of the harness fully into the light source common end boss. The common end is secured by tightening the finger screw on the common end boss.

4. Operation

Ensure that the glass fiber optic harness is attached. Switch on the power with the power switch. Units fitted with a dimming control can be dimmed via the dimming control knob located next to the power switch on the back of the unit. Turn the knob clockwise to increase the intensity of the light output and counter clockwise to dim the output.

5. Maintenance

The SCHOTT Spectra™ LED Light Source 100W is virtually maintenance free. Technical modification of the light source is expressly forbidden. Repairs must be carried out by the manufacturer or authorized persons.

To ensure that the light source is always operating in optimal condition the air intake and exhaust should be checked and cleaned on a regular basis (frequency of this depends upon the amount of dust in the area the light source is installed).

Excess dust should be removed wiping with a cloth, removal with a vacuum cleaner or blowing with compressed air.

5.1 Thermal trip

Thermal protection is provided by means of an automatic reset thermal trip. If the temperature of the unit rises above a predetermined level, the trip is activated and the power supplied to the light source is cut off. When the light source temperature returns to an acceptable operating level, the thermal trip automatically restores power, resuming normal operation. To reduce the possibility of thermal trip, make sure that the light source is being properly cooled by making sure that the air inlet and exhaust are not blocked and have proper airflow. It is also important to notice if the fan is on as it always should be as long as the light source is powered on.

Note: The causes of thermal trip operation must always be carefully investigated. Possible causes of the thermal trip activation are:

- Blocked air inlet, air exhaust or otherwise reduced air flow.
- Fan failure
- Wrong power supply.

6. Troubleshooting / Fault diagnosis

TYPE OF FAULT	CAUSE	SOLUTION
Light source not illuminated	No power supply to the unit	Check power supply is connected
	The power switch is in the 'off' position	Switch the power switch to the 'on' position
	The dimmer control knob is turned fully counter clockwise	Turn the dimmer control knob clockwise until the required illumination level is reached
	Thermal trip operated	Wait for the unit to cool and the light source will turn on automatically. Investigate reason for over heating
	Faulty power supply	Renew power supply
	Faulty light source	Service by authorized personal only
	Overheating	Investigate airflow, remove any obstructions
Light source illuminates and extinguishes repeatedly over period of minutes	Fan does not work	Service by authorized personal only

7. Service and repair

Repairs may only be carried out by the manufacturer or by persons authorised by the manufacturer. For further details contact your SCHOTT Lighting dealer.

8. Transport, storage and disposal

The light source and accessories should be transported in the packaging provided, or other suitable packaging that prevents damage to the light source.

The light source and accessories must be stored in a dry place between -10 °C and +70 °C

For recycling information please visit www.us.schott.com/architecture



9. Technical specification

Model	Units	4400K / 25mm	4400K / 12mm	3000K / 25mm	3000K / 12mm
Input Voltage	VDC	24	24	24	24
Input Current	A	4	4	4	4
Power Consumption	W	96	96	96	96
Colour Temperature	K	4400 +/- 300	4400 +/- 300	3000 +/- 300	3000 +/- 300
Colour Rendering	CRI	93 +/- 3	93 +/- 3	93 +/- 3	93 +/- 3
Typical Service Life (L70 ^h to 70% of original light output)	h	50000	50000	50000	50000
Operating Temperature	°C	All models 0 °C to 40 °C			
Storage Temperature	°C	All models -10 °C to 70 °C			
Cooling		All models Low speed axial fan giving 19 dB(A)			
IP Rating		All models IP 20			
Dimensions W x D x H	mm	All models 206 x 150 x 86			
Thermal Trip Type		All models Autorecting			

Recommended Power Supply	Units	4400K / 25mm	4400K / 12mm	3000K / 25mm	3000K / 12mm
Power Supply UL		STD-24050			
Input min.	VAC	100	100	100	100
Input max.	VAC	240	240	240	240
Frequency	Hz	50 to 60	50 to 60	50 to 60	50 to 60
Power Supply CE/UL		PFS120AP-11 RH			
Input min.	VAC	90	90	90	90
Input max.	VAC	264	264	264	264
Frequency	Hz	47 to 63	47 to 63	47 to 63	47 to 63
Output Voltage	VDC	24	24	24	24
Output Current	A	4	4	4	4
Input Connector		Male model IEC320/ C14			
Dimensions W x D x H (UL)	mm	168 x 66 x 39			
Dimensions W x D x H (CE/UL)	mm	170 x 65 x 37			

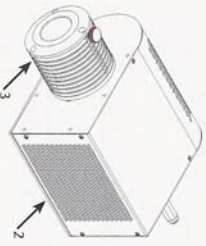
We reserve the right to make changes without notice in the design and supplied items within the scope of ongoing technical improvements.

10. Article numbers and accessories

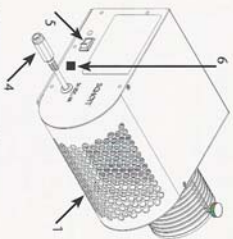
Unit	CT	Large bundle (12-25mm) or Small bundle (1-12mm)	ND (no Dimmer), YD (with Dimmer)	RC (reflector clear), RD (reflector diffused)	Article Number
SCHOTT Spectra™ LED 100W	4400	12-25	ND	RC	1246767
SCHOTT Spectra™ LED 100W	4400	12-25	YD	RC	1257204
SCHOTT Spectra™ LED 100W	4400	12-25	YD	RD	1257278
SCHOTT Spectra™ LED 100W	4400	1-12	ND	RC	1263030
SCHOTT Spectra™ LED 100W	4400	1-12	YD	RC	1257281
SCHOTT Spectra™ LED 100W	4400	1-12	YD	RD	1257282
SCHOTT Spectra™ LED 100W	3000	12-25	ND	RC	1263032
SCHOTT Spectra™ LED 100W	3000	12-25	YD	RC	1257283
SCHOTT Spectra™ LED 100W	3000	12-25	YD	RD	1257285
SCHOTT Spectra™ LED 100W	3000	1-12	ND	RC	1263087
SCHOTT Spectra™ LED 100W	3000	1-12	YD	RC	1257286
SCHOTT Spectra™ LED 100W	3000	1-12	YD	RD	1257287
Mounting Brackets		100w Class 2 power supply UL certified			
100W PSU		1258493			
120W PSU		120w Class C power supply CE/UL certified			
Mainst lead EU Schuko		IEC-Type, cable length 2 m (6ft)			
Mainst lead UK		IEC-Type, cable length 2 m (6ft)			
Mainst lead USA		IEC-Type, cable length 2 m (6ft)			

LIGHT SOURCE FOR FIBER OPTIC SHOWCASE LIGHTING

	Article Nr
SCHOTT Spectra™ LED Light Source 100W 4400K ND RC 25mm no dimmer, reflector clear, 25mm diameter; light source for randomized harnesses	1246767
SCHOTT Spectra™ LED Light Source 100W 4400K YD RC 25mm with dimmer, reflector clear, 25mm diameter; light source for randomized harnesses	1257204
SCHOTT Spectra™ LED Light Source 100W 4400K YD RD 25mm with dimmer, reflector diffused, 25mm diameter; light source for non-randomized harnesses	1257278
SCHOTT Spectra™ LED Light Source 100W 4400K ND RC 12mm no dimmer, reflector clear, 12mm diameter; light source for randomized harnesses	1263030
SCHOTT Spectra™ LED Light Source 100W 4400K YD RC 12mm with dimmer, reflector clear, 12mm diameter; light source for randomized harnesses	1257281
SCHOTT Spectra™ LED Light Source 100W 4400K YD RD 12mm with dimmer, reflector diffused, 12mm diameter; light source for non-randomized harnesses	1257282
SCHOTT Spectra™ LED Light Source 100W 3000K ND RC 25mm no dimmer, reflector clear, 25mm diameter; light source for randomized harnesses	1263032
SCHOTT Spectra™ LED Light Source 100W 3000K YD RC 25mm with dimmer, reflector clear, 25mm diameter; light source for randomized harnesses	1257283
SCHOTT Spectra™ LED Light Source 100W 3000K YD RD 25mm with dimmer, reflector diffused, 25mm diameter; light source for non-randomized harnesses	1257285
SCHOTT Spectra™ LED Light Source 100W 3000K ND RC 12mm no dimmer, reflector clear, 12mm diameter; light source for randomized harnesses	1263087
SCHOTT Spectra™ LED Light Source 100W 3000K YD RC 12mm with dimmer, reflector clear, 12mm diameter; light source for randomized harnesses	1257286
SCHOTT Spectra™ LED Light Source 100W 3000K YD RD 12mm with dimmer, reflector diffused, 12mm diameter; light source for non-randomized harnesses	1257287

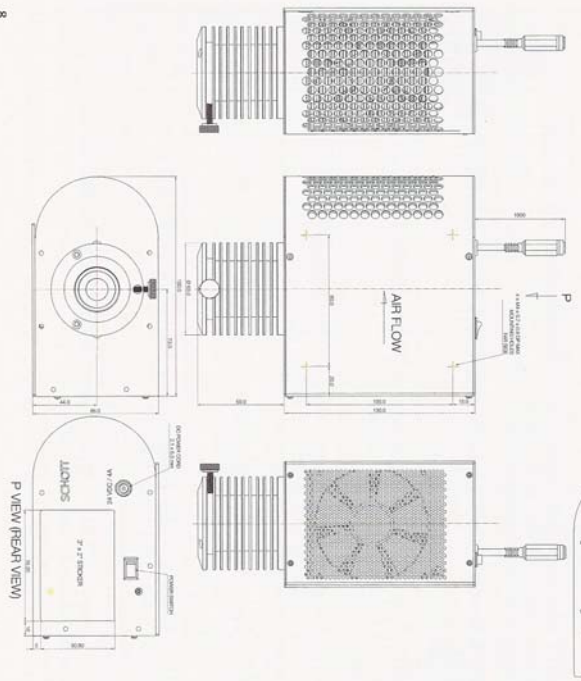


1. Exhaust air vent (Min 50mm (1,97"))
from non ventilated surface)
2. Intake air vent (Min 50mm (1,97"))
from non ventilated surface)



3. Common end boss
4. DC power supply socket (24VDC/4A)
5. Power switch
6. Dimmer control knob

Dimensions (Base mounted)



Dimensions (Side mounted)

