FiberSource Q150

user manual

Martin

C O N T E N T S

INTRODUCTION

Thank you for selecting the Martin *FiberSource Q150*. The *FiberSource* is a rugged and efficient light specially designed for illuminating fiber optics.

Features

- Long-life Osram HQI-R 150 W discharge lamp
- Multi-cable adapter for 50 to 300 optic fibers
- Coated cold light reflector and combined UV/heat filter for cool and safe light.
- Diffusion filter for even light distribution
- Built-in slot for an optional color or CTC filter
- Thermo-switch for overheating protection
- Super-quiet fan cooling

About this manual

Please familiarize yourself with this manual before using the *FiberSource Q150*. Electricity and ultraviolet light are dangerous if handled incorrectly. Please follow the precautions listed in section 2 and observe the warnings printed on the fixture. If you have any doubts about how to operate or service the fixture safely, please contact your Martin dealer for assistance before proceeding.

Please refer any service not described in this manual to a qualified technician.

SAFETY PRECAUTIONS

- The *FiberSource Q150* is NOT for domestic use.

- Read user manual before connecting or operating the fixture.

- Always completely disconnect the fixture from electricity and allow to cool for 5 minutes when:
  - Removing any part, including the fiber adaptor, from the fixture.
  - Replacing the lamp or fuse.
  - Changing the ballast settings.

- To reduce risk of fire and electrical shock, do NOT expose to rain or moisture.

- Keep flammable materials at least 0.1 meters (4 inches) from the fixture.

- Do NOT block fan or exhaust vents.

- Do NOT operate the fixture with the fiber optic cable, filters, or any other parts removed: discharge lamps operate under pressure and can explode, and an unshielded lamp emits dangerous UV radiation that can cause burns and eye damage.

- Check voltage and frequency settings before applying power.

- Ensure that the fixture is properly grounded (earthed).

- Do NOT operate the fixture if the ambient temperature (t_a) exceeds 40°C (104°F).

- Refer service operations not described in this manual to a qualified technician.

SETUP

The *FiberSource Q150* includes:

- IEC power cable
- User manual
- Osram HQI-R 150 W discharge lamp

adaptor shaft   power socket

fuse holder

cover screws

230 mm

317 mm

230 mm
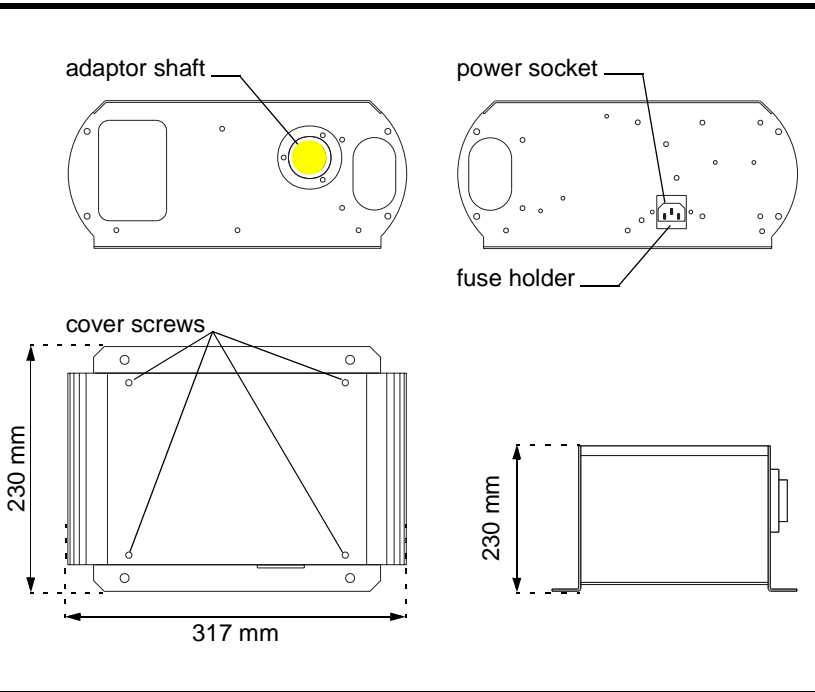
Installing the lamp

The *FiberSource Q150* is designed to work exclusively with the Osram HQI-R 150 W discharge lamp. *Do not install any other type of lamp.* The *FiberSource Q150* ships from the factory with the lamp installed in the ideal burning position when the fixture sits on a level surface. *The lamp must be turned so the wires point toward the ground if the fixture is mounted on a wall or ceiling.*

As the quartz envelope weakens with use and may eventually burst, lamp replace-

ment is recommended after 6000 hours of use.

Avoid touching the glass bulb. Oils from your fingers will shorten the lamp life. To remove oils, use a soft cloth and denatured alcohol.

1. Disconnect the fixture from electricity and allow it to cool for 5 minutes.

2. Remove the 4 cover screws and lift off the cover.

3. To remove a lamp, disconnect the lamp wires, place your fingers under the reflector and gently lift out the lamp. *Lifting by the ceramic base may break the lamp.*

4. Position the lamp behind the diffusion filter. Turn it so the wires will point toward the ground when the fixture is permanently installed. This positions the filament in the ideal horizontal burning position.

5. Gently guide the lamp between the springs.

6. Plug the lamp wires into the white connector.

7. Turn the diffusion filter 90°, if necessary, so the long sides of the prisms align with the filament. See filter placement sketch below.
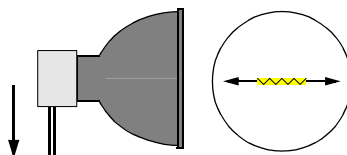
Mounting the fixture

The FiberSource Q150 must be positioned such that the lamp filament is horizontal. It may be mounted on a wall so long as the lamp is not vertical. The fixture may be secured by the 4 mounting holes in the base.

The FiberSource Q150 gets hot. Install it in a dry area where there is -

*   no danger of accidentally touching it,
*   at least 10 cm (4 in) clearance around the fixture,
*   good circulation,
*   no flammable material nearby.

Checking voltage and frequency settings

The *FiberSource Q150* voltage setting must be within 5% of the AC mains supply. The voltage setting may be adjusted to local conditions. The frequency (50 or 60 Hz depending on model), however, must match your supply. Check the settings printed on the label on the back of the fixture. See section 4 to change the ballast voltage setting.

Inserting fiber optic cable

Fiber optic cables of 50 to 300 1 mm fibers may be attached to the *FiberSource Q150* using the specially designed fiber optic cable adaptor. Please refer to the instructions with the cable adaptor. The correct adaptor position within the shaft depends on the number of fibers.

1. Slide the adaptor into the shaft until the edge of the groove closest to the wide end of the adaptor (see below) aligns with the face of the adaptor shaft.

    If, for example, there are 100 fibers, then count to the 7th groove from the wide end and insert the adaptor until the groove just disappears and the edge is even with the face of the female fitting.

2. Tighten the set screw.

Fibers (groove)

50 (10)

75 (8)
100 (7)
125 (6)
150 (5)
175 (4)
200 (3)
225 (2)
250 (1)
275 - 300 (0)

Alignment Grooves
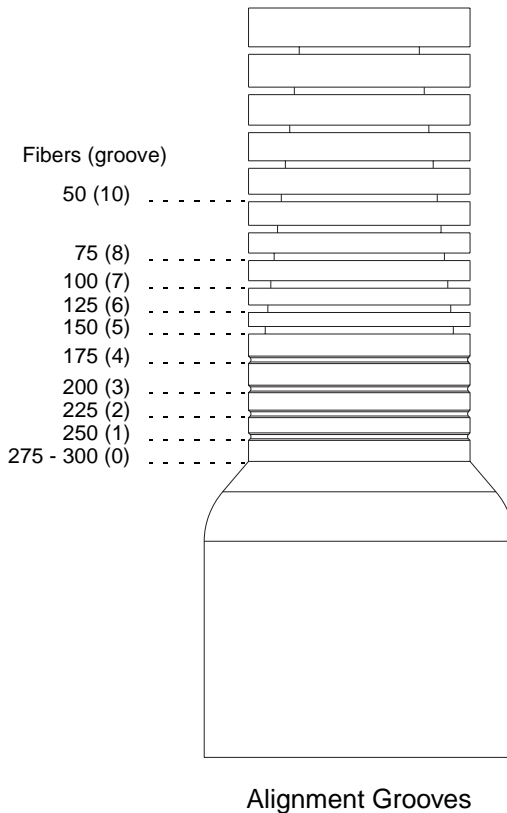
Installing a plug on the power cord

W A R N I N G !

The fixture must be grounded (earthed).

The *FiberSource Q150* may be delivered without a plug on the power cord. A minimum 8 A, 3-prong grounding-type plug must be installed. Following the manufacturer's instructions -

1. Connect the BROWN wire to the LIVE pin.
2. Connect the BLUE wire to the NEUTRAL pin.
3. Connect the YELLOW/GREEN wire to the GROUND (EARTH) pin.

The *FiberSource Q150* is ready for operation. To use, connect the power cord to the socket on the back of the *FiberSource Q150* and AC power.

Inserting a color filter

The color of the light may be altered by inserting a 52 mm square dichroic glass color or temperature correction filter. See appendix c for a list of available colors. The *FiberSource Q150* has a slot for 1 filter.

1. Disconnect the *FiberSource Q150* from electricity and allow to cool.
2. Remove the 4 cover screws and lift off the cover.
3. Guide the filter into the slot in front of the UV/heat filter. See sketch below.
4. Replace the cover.

Align long side of diffusion prisms with lamp filament.
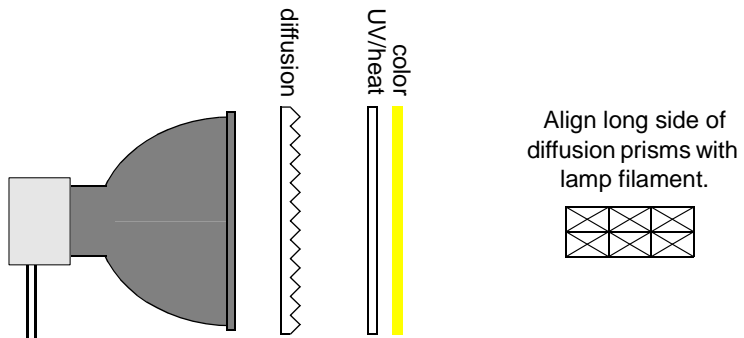
Filter Placement

s e c t i o n 4
BASIC SERVICE

W A R N I N G !

Dangerous voltages. Ensure the fixture is isolated from electricity before removing the cover.

Changing the ballast voltage

1. Unplug the *FiberSource Q150* and allow it to cool.
2. Remove the 4 cover screws and lift off the cover.
3. Remove the ballast cover plate.
4. Remove the black wire from the ballast terminal: insert a small screwdriver in the small hole under the terminal and release the spring with a clockwise turn.
5. Open the spring as above for the correct terminal and insert the black wire. The terminals are marked on the side of the ballast.
6. Replace the ballast cover plate.
7. Replace the cover.

50 Hz AC Voltage	EU Model Ballast Setting	60 Hz AC Voltage	US Model Ballast Setting
218 - 235 V	230 V	210 - 225 V	220 V
235 - 245 V	240 V	225 - 240 V	230 V
245 - 260 V	250 V		

Replacing the fuse

1. Unplug the power cord from the fixture.
2. Place the tip of a screwdriver in the slot on top of the fuse holder and pry open the holder.
3. Replace the fuse with one of the same rating. The rating is shown on the label.
4. Replace the fuse holder and reconnect the power cord.

TROUBLESHOOTING

problem	probable cause(s)	suggested remedy
No light and the fan does not run.	No power to the fixture.	• Check connections.
	Blown fuse.	• Replace fuse.
Fan runs but there is no light.	Lamp too hot to strike.	• Wait a few minutes. Lamp will strike when cool.
	Incorrect voltage setting.	• Check and correct voltage setting.
	Burned out lamp.	• Install new lamp.
	Fixture overheating.	• Allow to cool. • Improve air flow. • Clean the fan.
Poor or uneven light.	Adaptor installed incorrectly.	• Adjust adaptor as described in section 3.
	Rough fiber ends.	• File fiber ends smooth as described in adapter installation.
	Lamp filament oriented incorrectly.	• Turn lamp so wires point toward the ground.

If the suggested remedies do not solve the problem, contact your Martin dealer for service.

SPECIFICATIONS

Dimensions

- Length .... 230 mm (9.1 in)
- Width ....317 mm (12.5 in)
- Height.. 139 mm (5.5 in)
- Weight ....5 kg (11 lb)

Electrical

- Power consumption ....180 W
- Current consumption, EU model................................0.9 A at 230 V
- Current consumption, US model...............................1.0 A at 220 V
- Ballast taps, EU model... 230/240/250 V
- Ballast taps, US model.. 220/230 V
- AC frequency, EU model ....50 Hz
- AC frequency, US model ....60 Hz
- Fuse ....3.15 AT / 250 V

Source

- Lamp ....Osram HQI-R discharge
- Power ....150 W
- Burning angle .... horizontal with wires down
- Rated average life.. 6000 h
- Color temperature 4200K
- Output*, 10 mm diameter .... 1850 lm
- Output*, 20 mm diameter .... 4000 lm
- Output*, 25 mm diameter .... 5200 lm

* Does not include filter and cable loss.

Construction

- Housing ....steel and aluminum
- Finish ....electrostatic powder coating

Thermal

- Cooling method.. forced air
- Surface temperature under normal conditions .... 65° C (150° F)
- Maximum operating environment temperature .... 40° C (104° F)
- Protection .... thermo-switch

ACCESSORIES AND REPLACEMENT PARTS

52 x 52 x 1.1 mm color filters

Color	P/N	Color	P/N
3500 - 5600K CTC	392692	5500 - 3400K CTC	392654
Red 301	392655	Blue 101	392658
Red 304	392684	Blue 102	392659
Red 305	392685	Blue 103	392660
Red 308	392686	Blue 104	392661
Red 309	392687	Blue 105	392662
Green 201	392667	Blue 106	392663
Green 202	392668	Blue 107	392657
Green 203	392669	Blue 108	392664
Green 204	392670	Blue 111	392665
Green 205	392671	Orange 302	392677
Green 206	392656	Orange 306	392678
Green 208	392672	Purple 502	392682
Magenta 501	392673	Purple 509	392683
Magenta 504	392674	Cyan 401	392666
Magenta 505	392675	Yellow 601	392688
Magenta 507	392676	Yellow 602	392689
Pink 303	392679	Yellow 603	392690
Pink 307	392680	Yellow 604	392691
Pink 312	392681	1/2 minus green	392694

Fiber optic cables

Part No.	Emission	Diameter		1 mm fibers
OFIB01	side	3/16"	4.8 mm	10
OFIB02	side	5/16"	7.9 mm	18
OFIB03	side	7/16"	11.1 mm	50
OFIB04	side	9/16"	14.3 mm	80
OFIB05	end	3/16"	4.8 mm	12
OFIB06	end	5/16"	7.9 mm	25
OFIB07	end	7/16"	11.1 mm	50
OFIB08	end	9/16"	14.3 mm	75

Other accessories
- Fiber adaptor kit..P/N 919302

Replacement parts
- Osram HQI-R 150 W discharge lamp ....P/N 346037
- 3.15 AT fuse ....P/N 350003