FiberSource Q150

user manual

Contents

section 1
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.

section 2
SAFETY PRECAUTIONS

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

- Read user manual before connecting or operating the fixture.

- For protection against dangerous electric shock, always ground (earth) the fixture electrically. Use only a source of AC power that complies with local building and electrical codes.

- Disconnect the fixture from AC power if the lamp blows. Allow the fixture to cool for 5 minutes before installing a new lamp.

- Always completely disconnect the fixture from electricity and allow to cool when removing any part, including the fiber adaptor.

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

- Keep all combustible materials (for example fabric, wood, paper) at least 10 cm (4 inches) away from the fixture. Keep flammable materials well away 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.

- 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.

s e c t i o n   3

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
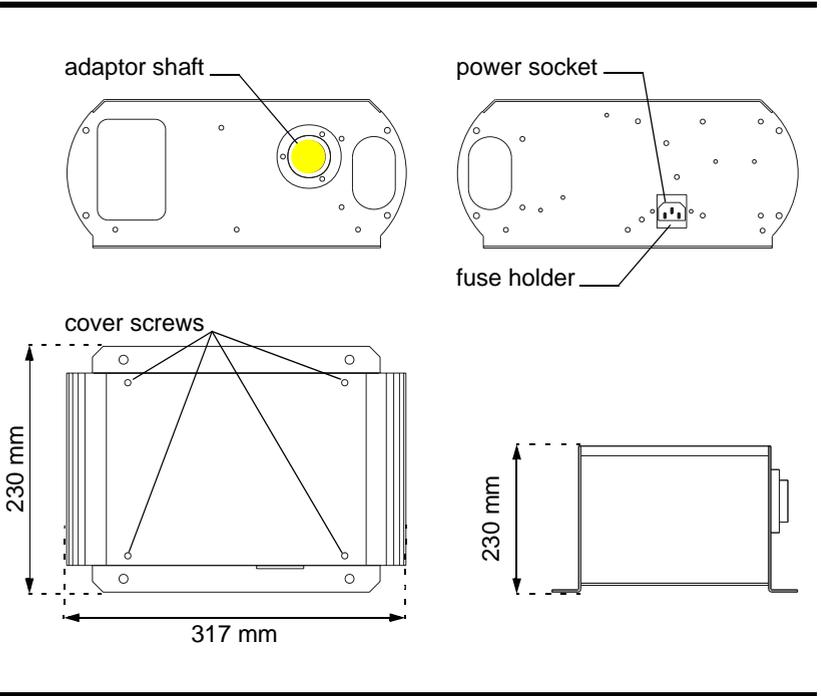
Installing the lamp

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.

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.
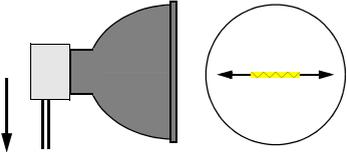
5. Gently guide the lamp between the springs.

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.

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.

4. Replace the cover.

Align long side of diffusion prisms with lamp filament.
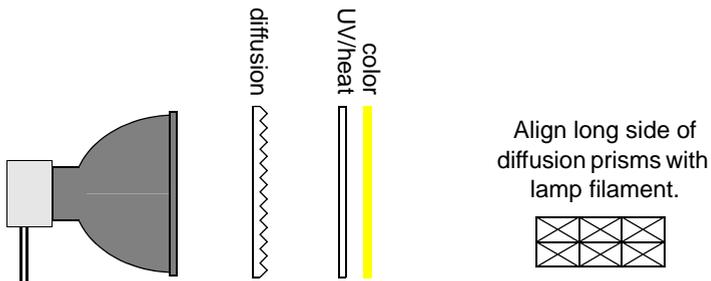
Inserting fiber optic cable

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
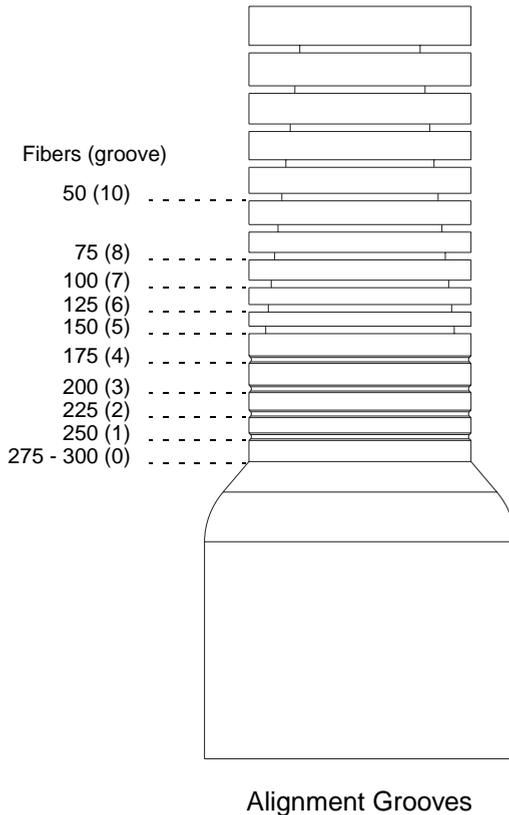
Mounting the fixture

The FiberSource Q150 must be positioned such that the lamp filament is horizontal. The fixture may be mounted on a vertical surface if it is turned so that the lamp is horizontal.
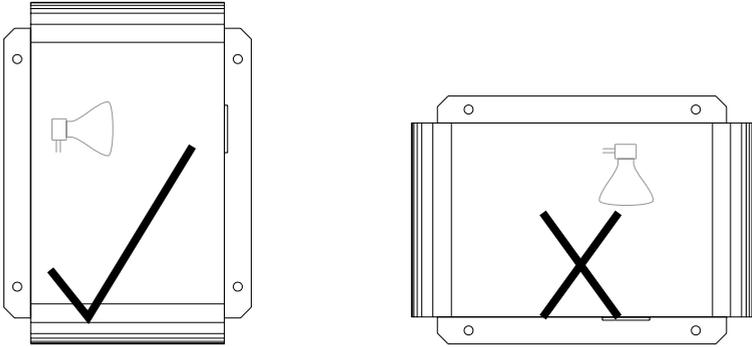
Wall-mount with lamp horizontal

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.

Secure the fixture with 6 mm hardware (not included) through the 4 mounting holes in the base. The mounting hardware and surface shall be able to bear at least 10 times the weight of the fixture.

Checking voltage and frequency settings

The fixture voltage setting must match your AC mains voltage. Check the setting printed on the label on the back of the fixture and verify that it is the correct setting for your voltage before applying power to the fixture. See page 12 for more information.

Installing a plug on the power cord

The fixture's mains lead may require a grounding-type cord cap that fits your power distribution cable or outlet. Consult a qualified electrician if you have any doubts about proper installation.

W A R N I N G !

For protection from dangerous electric shock, the fixture shall be grounded (earthed). The AC mains supply shall have a fuse or circuit breaker and ground-fault protection.

Following the cord cap manufacturer's instructions, connect the yellow and green wire to ground (earth), the brown wire to live, and the blue wire to neutral. The table below shows some pin identification schemes.

Wire	Pin	Marking	Screw color
brown	live	"L"	yellow or brass
blue	neutral	"N"	silver
yellow/green	ground	⏚	green

section 4
BASIC SERVICE

WARNING!

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	46403139	5500 - 3400K CTC	46403101
Red 301	46403102	Blue 101	46403105
Red 304	46403131	Blue 102	46403106
Red 305	46403132	Blue 103	46403107
Red 308	46403133	Blue 104	46403108
Red 309	46403134	Blue 105	46403109
Green 201	46403114	Blue 106	46403110
Green 202	46403115	Blue 107	46403104
Green 203	46403116	Blue 108	46403111
Green 204	46403117	Blue 111	46403112
Green 205	46403118	Orange 302	46403124
Green 206	46403103	Orange 306	46403125
Green 208	46403119	Purple 502	46403129
Magenta 501	46403120	Purple 509	46403130
Magenta 504	46403121	Cyan 401	46403113
Magenta 505	46403122	Yellow 601	46403135
Magenta 507	46403123	Yellow 602	46403136
Pink 303	46403126	Yellow 603	46403137
Pink 307	46403127	Yellow 604	46403138
Pink 312	46403128	1/2 minus green	46403141

Fiber optic cables

P/N	Emission	Diameter		Fibers
15901002	side	3/16"	4.8 mm	10
15901004	side	5/16"	7.9 mm	18
15901006	side	7/16"	11.1 mm	50
15901008	side	9/16"	14.3 mm	80
15900002	end	3/16"	4.8 mm	12
15900004	end	5/16"	7.9 mm	25
15900006	end	7/16"	11.1 mm	50
15900008	end	9/16"	14.3 mm	75

Other accessories

- Fiber adaptor kitP/N 91611016

Replacement parts

- Osram HQI-R 150 W discharge lampP/N 97010101
- 3.15 AT fuseP/N 05020013