

martinarchitectural

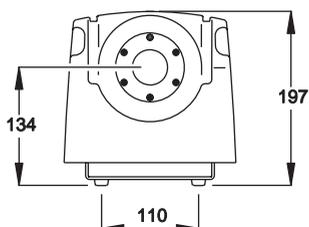
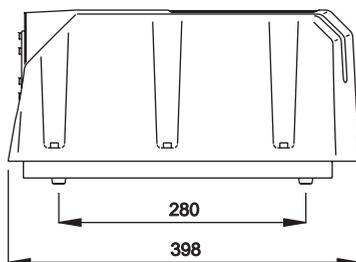
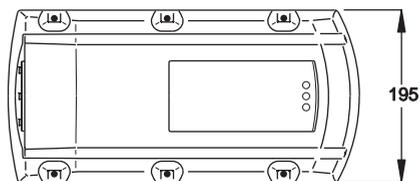
FiberSource B150



User Manual

Dimensions

Measurements are in millimeters



© 2004-2006 Martin Professional A/S, Denmark.

All rights reserved. No part of this manual may be reproduced, in any form or by any means, without permission in writing from Martin Professional A/S, Denmark.

Printed in Denmark.

P/N 35000162, Rev B

- Introduction**5
 - Unpacking5
 - Safety information5
- Installation**7
 - AC power7
 - Fiber optic cable11
 - Fixture orientation and location12
 - Fitting a color filter14
- General operation**15
- Service**16
 - Lamp replacement16
 - Cleaning18
 - Fuse replacement19
- Troubleshooting**20
- FiberSource B150 specifications**21

INTRODUCTION

Thank you for selecting the Martin FiberSource B150. The FiberSource B150 is a light generator for fiber optic installations that can receive up to 800 flexible 1mm (0.04 in.) fibers, either side or end emitting. It has a weather-resistant IP rating of 44 that enables it to be used in outdoor installations. The standard white light source can produce colored light with the addition of a dichroic color filter. A wide range of filters is available from your Martin dealer. The FiberSource B150 is compatible with all major fiber manufacturers.

UNPACKING

The FiberSource B150 is supplied with a Philips MasterColor CDM-SA/R 150W lamp installed, and this user manual. The latest version of this user manual is available in the support area of the Martin website at <http://www.martin.com>

SAFETY INFORMATION

Warning! *This product is not for household use.*

This product presents risks of lethal or severe injury due to fire and heat, electric shock, ultraviolet radiation, lamp explosion, and falls. **Read this manual** before powering or installing the fixture, follow the safety precautions listed below and observe all warnings in this manual and on the fixture. If you have questions about how to operate the fixture safely, please contact your Martin dealer or call the Martin 24-hour service hotline on +45 70 200 201.

Guarding against electric shock

- Disconnect the fixture from AC power before removing or installing the lamp, fuses, or any part.
- Always ground (earth) the fixture electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Refer all service to a Martin service technician.

Preventing UV radiation and lamp explosion

- Never operate the fixture with missing or damaged lenses, without a fiber adaptor installed, or with the housing removed.
- When replacing the lamp, allow the fixture to cool for at least 15 minutes before opening the fixture.
- Do not stare directly into the light. Never look at an exposed lamp while it is lit.
- Replace the lamp if it becomes defective or worn out.

Guarding against burns and fire

- Never attempt to bypass the thermostatic switch or fuses. Always replace defective fuses with ones of the specified type and rating.
- Maintain at least 0.2 meter (8 in.) clearance around the air vent.
- Keep all combustible materials (for example fabric, wood, paper) at least 0.1 meter (4 in.) away from the fixture. Keep flammable materials well away from the fixture.
- Install the fixture in a well ventilated area.
- Never place filters or other materials over the lens.
- The exterior of the fixture becomes very hot, up to 70° C (158° F) during normal operation. Do not locate the fixture in areas where accidental contact is likely.
- Do not modify the fixture or install other than genuine Martin parts.
- Do not operate the fixture if the ambient temperature (T_a) exceeds 40° C (104° F).

Preventing injury due to falls

- When suspending the fixture above ground level, verify that the structure can safely hold the weight of all installed devices.
- Block access below the work area whenever installing or removing the fixture.

INSTALLATION

This section describes in general terms how to mount the fixture and connect it to data and AC power.

Warning! *The procedures in this chapter must be performed by qualified professionals only.*

AC POWER

Warning! *Disconnect the fixture from AC power before removing any cover.*

Important! *Verify voltage and frequency settings before applying power.*

Do not connect the FiberSource B150 to an electrical dimmer system: doing so can damage the electronics.

Power supply settings

The FiberSource B150 is factory-wired to one of the configurations shown in Table 1. The model number and factory settings are printed on the serial number label which can be found on the base of the fixture. If your local AC voltage or frequency differ from the settings for your model, the fixture's power supply must be rewired by a qualified installer or technician.

Model No.	Voltage	Frequency
90523400	230 V	50 Hz
90523300	120 V	60 Hz

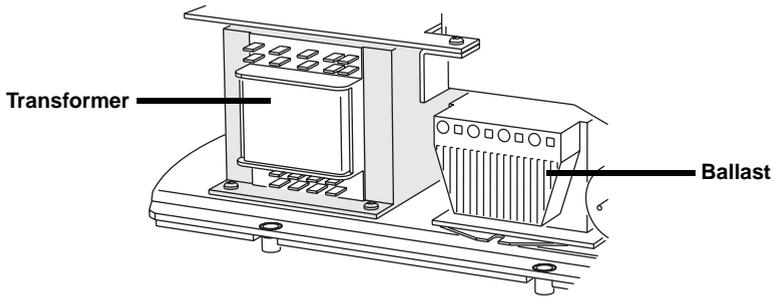
Table 1: Default Power Supply Settings

Rewiring the power supply

Always use the setting that most closely matches the local AC mains voltage and frequency.

1. Verify that the FiberSource B150 is isolated from AC power.

- Remove the fixture housing using a 5mm Allen wrench.

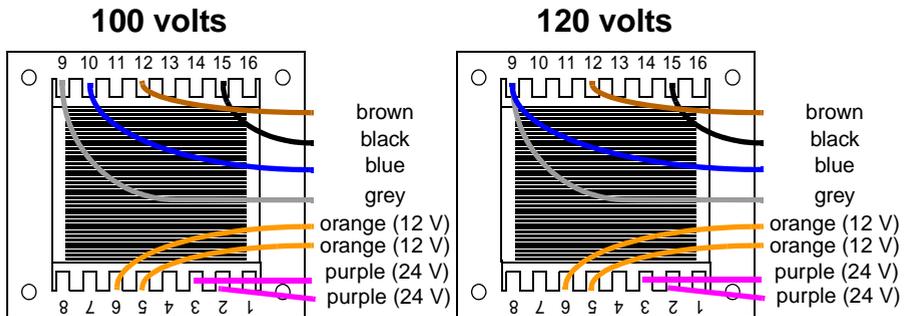


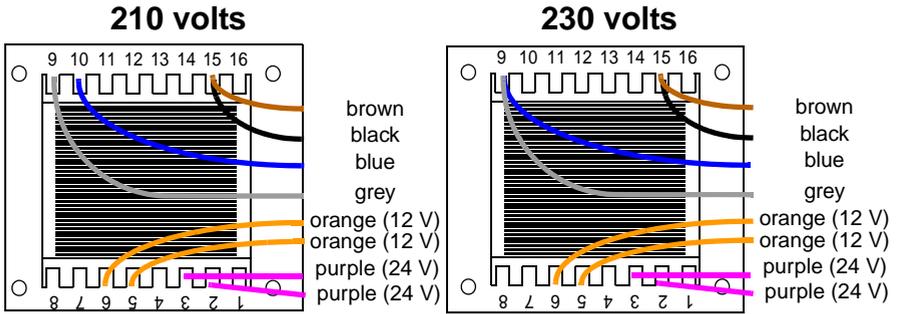
- On the transformer, move the brown and blue wires (those with insulated spade plugs) to the transformer taps shown for your mains voltage (see Table 2).

Important! Do not move the grey wire from terminal 9 or the black wire from terminal 15.

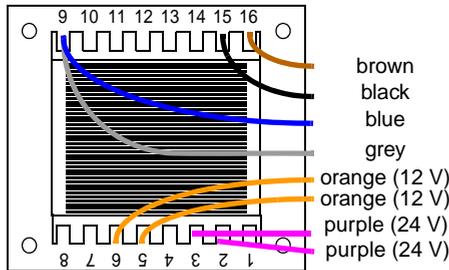
Mains voltage	Setting	Brown wire on tap	Blue wire on tap
95 - 109 V	100 V	12	10
110 - 130 V	120 V	12	9
200 - 219 V	210 V	15	10
219 - 239 V	230 V	15	9
240 - 260 V	250 V	16	9

Table 2: Transformer settings

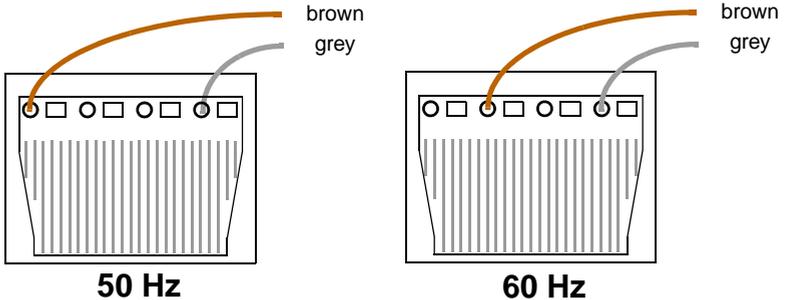




250 volts



- To set the frequency, move the *brown* wire on the ballast to the “230-50” (50 Hz) or “230-60” (60 Hz) terminal as shown. The wire is released and locked by inserting a small screwdriver in the square hole next to the terminal and prying back the spring.
- Tug lightly on the brown wire to make sure that it is connected securely.



- Replace the fixture housing before applying power.

Mains connection

Warning! For protection from dangerous electric shock, the fixture must be grounded (earthed). The AC mains supply must be fitted with a fuse or circuit breaker, ground-fault protection, and a means

to isolate the fixture from the mains during service or when not in use.

The FiberSource B150 is equipped with a 1.8-meter (5.9 ft.) length of 3-conductor 0.75 mm² (~18 AWG) electrical cable for connection to the AC power supply. The cable attaches with 1/4" female spade plugs on the live and neutral wires and a ring terminal on the ground wire. Other cable can be installed as follows.

Replacing the mains lead

1. Isolate the fixture from AC power.
2. Remove the fixture housing.
3. Disconnect the existing mains cable and pull it through the hole in the chassis.
4. Pass the new cable through the hole in the chassis and connect the leads. The live wire connects to PL3, the neutral wire connects to PL1, and the ground wire connects to the chassis screw terminal.
5. Draw up the slack in the AC and data cables and replace the fixture housing.

Installing a cord cap on the mains lead

A cord cap may be installed on the mains lead for testing, service, and temporary applications.

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. Table 3 shows some pin identification schemes; consult an electrician if you have any doubts about proper installation.

Wire (EU)	Wire (US)	Pin	Marking	Screw (US)
brown	black	live	"L"	yellow or brass
blue	white	neutral	"N"	silver
yellow/green	green	ground		green

Table 3: Cord Cap Connections

FIBER OPTIC CABLE

Fiber optic cable is connected to the FiberSource B150 using one of the available fiber adaptor kits:

- P/N 91611035, for 75-350 x Ø1mm fibers. This has a diameter of 30mm and is supplied with an adaptor ring that increases the adaptor diameter to 38mm so that it will fit in the port of the FiberSource B150 fixture.
- P/N 91611034, for 350-800 x Ø1mm fibers. This has a diameter of 38mm.

The fiber adaptors are tapered to fit a varying number of fiber optic cables. The adaptor often needs to be cut for proper fit and maximum light output.

Cable types

The following guidelines provide a starting point for estimating your needs. Light transmission through fiber-optic cable depends on its quality and results will vary depending on the type of cable used.

Side-emitting cable

With 1 fixture, best results are obtained when the fiber optic cable is 10 m (33 ft.) or shorter. The length may be increased to 15 m (50 ft.) by looping the cable and illuminating both ends. With 2 fixtures, one at each end of the cable, lengths up to 30 m (100 ft.) can be achieved.

End-emitting cable

Light output decreases with length: keep the cable as short as possible. The maximum recommended length is 25 meters. Cut the light emitting end of the fibers with a sharp knife for maximum output.

Installing fiber optic cable

1. Install the cable in the adaptor ferrule according to the instructions supplied with the adaptor ferrule.
2. Insert the adaptor ferrule into the port of the FiberSource B150.

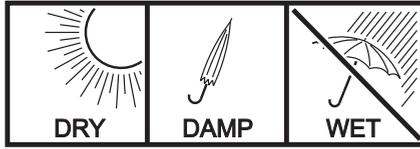
Warning

If your adaptor ferrule is the smaller 30 mm diameter adaptor (P/N 91611035), then you need to insert it into an adaptor ring to increase the diameter to 38 mm. Place the adaptor ring onto the adaptor ferrule so that the ends are flush. Screw the adaptor ring tight using a 2mm Allen wrench. Do not push the adaptor ferrule past the end of the adaptor ring as the fiber will be too close to the light source and will be damaged.

3. Tighten the set screw with a 2 mm (5/64 in.) Allen wrench.

FIXTURE ORIENTATION AND LOCATION

The FiberSource B150 can be installed in dry or damp locations, but must not be installed in wet locations.



When choosing a location, respect the following:

- Do not bury the FiberSource B150 or otherwise locate it in an unventilated space.
- Do not mount the FiberSource B150 on a wall in a vertical alignment. It may be mounted horizontally (see “Fastening the FiberSource B150 to a surface” on page 12).
- Do not install in wet locations.

Install the fixture in a location where it is:

- At least 0.5 meters (20 in.) away from the surface to be illuminated.
- At least 0.1 meter (4 in.) away from any combustible materials such as wood or paper.
- Away from accidental public contact.

The fixture can simply be placed on a stable surface so that it rests on the four plastic feet in its base, but it is possible to fasten it to a surface.

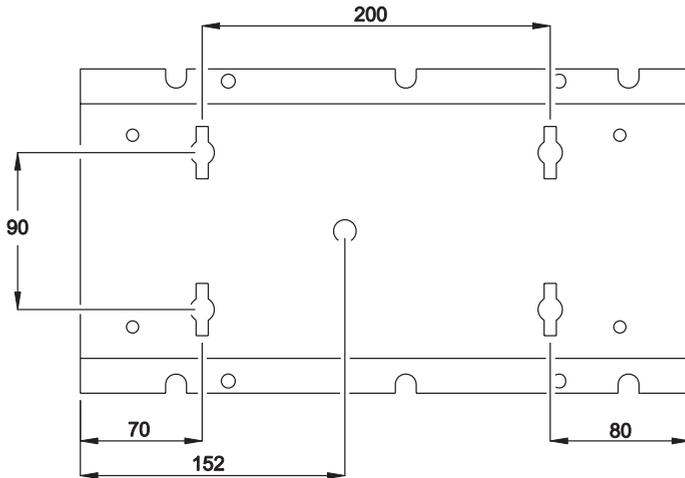
Fastening the FiberSource B150 to a surface

To fasten the FiberSource B150 to a surface:

1. Isolate the fixture from power and allow it to cool.
2. Remove the fixture housing using a 5mm Allen wrench.
3. Separate the base plate from the fixture chassis by removing the four Allen screws using a 5mm Allen wrench.
4. Remove the four plastic feet from the base using a cutting or clipping tool.

Warning! *Ensure that all fasteners used and the supporting surface are able to bear the weight of the fixture.*

5. Bolt the baseplate to the surface using suitable fasteners that will fit through the four 13mm (0.5 in) holes. Note that if you are attaching the fixture to a vertical surface such as a wall, the baseplate must be aligned horizontally along its length (see next illustration).



Important! Because of the specifications of some lamps and the potential for water to enter the fixture through the air filter, vertically-aligned mounting on a vertical surface such as a wall is not recommended.

6. Re-attach the chassis to the base plate with the four Allen screws and a 5mm Allen wrench.
7. Replace the fixture housing.

FITTING A COLOR FILTER

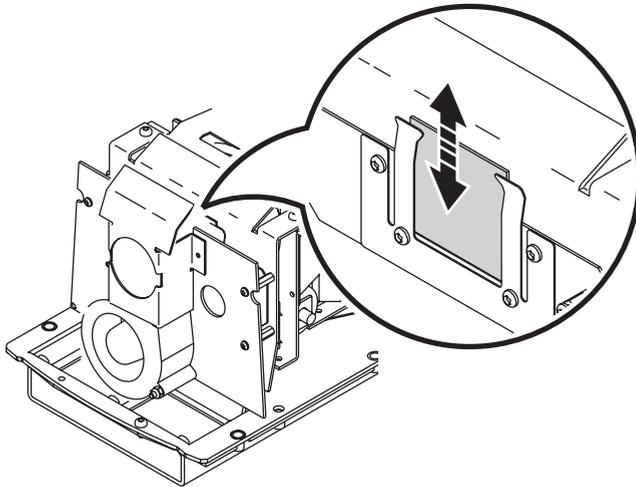
Martin Architectural dealers have a wide selection of color filters in stock and can arrange for custom colors to be made to order. Please contact your dealer for further advice and information.

Among the most popular standard color filters are:

- Color temperature correction filter 5500-3400°K.P/N 46402201
- Red 301MP/N 46402202
- Green 206P/N 46402203
- Blue 101P/N 46402204

To fit a color filter:

1. Disconnect the fixture from power and allow it to cool.
2. Remove the fixture housing using a 5mm Allen wrench.
3. The dichroic color filter must be perfectly clean and free from grease. If necessary, clean the filter carefully with isopropyl alcohol, using a gentle rubbing motion working from the center to the edges, then rinse in distilled water and dry with compressed air or a lint-free cloth.
4. Wearing a glove or holding the filter with a lint-free cloth to avoid contaminating it with grease from your fingers, slide the filter into the filter holder clip in front of the lamp module, and check that it is secure.



5. Replace the housing before applying power.

GENERAL OPERATION

The lamp illuminates when power is applied to the FiberSource B150.

To help ensure maximum lamp life, always allow the lamp to warm up fully (approx. 5 minutes) before powering the fixture off.

Avoid powering several fixtures on at the same time, as this can cause a peak current that may trip circuit breakers and a power supply voltage drop that may make it impossible for lamps to strike.

Check the FiberSource B150 regularly for signs of dust and dirt buildup, and clean if necessary (see "Cleaning" on page 18).

SERVICE

This section describes service procedures that can be performed by the user. Refer all service not described here to a qualified Martin technician.

Warning! *Disconnect the fixture from power before removing the fixture housing.*

LAMP REPLACEMENT

The FiberSource B150 uses one of the following discharge lamps.

Lamp	Efficiency	Color Temp.	Average Life
Philips MasterColor CDM-SA/R 150W	33 Lm/W	4200 K	6000 hr.
Osram HQI-R 150W (can only be operated horizontally)	35 Lm/W	4200 K	6000 hr.

Table 4: Lamp specifications

Important! *Installing any other lamp may damage the fixture.*

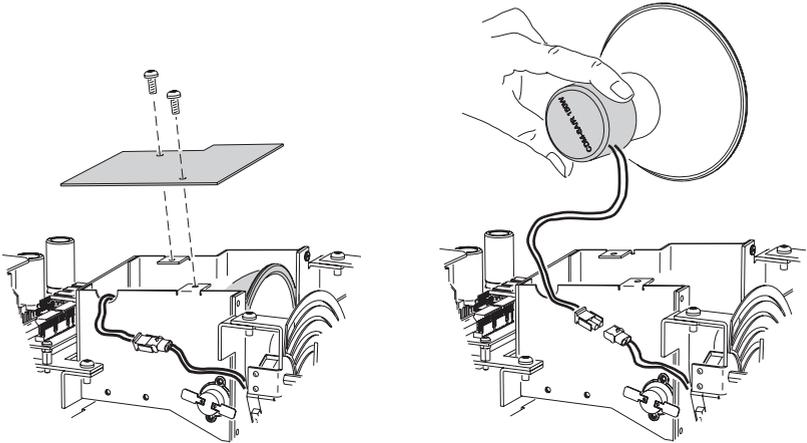
Warning! *Allow the lamp to cool for at least 15 minutes before removing the lamp cover.*

Lamp replacement requires a 5 mm Allen wrench and a Philips screwdriver.

To replace the lamp:

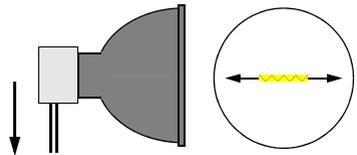
1. Disconnect the fixture from power and allow it to cool.
2. Remove the fixture housing.

3. Remove the screws on the cover-plate over the lamp and then remove the cover-plate.



4. Gently remove the lamp from its housing.
5. Remove the old lamp from the connecting plug.
6. Clean the glass bulb and reflector of the new lamp with an alcohol wipe or a clean, lint-free cloth wetted with alcohol.
7. Holding the new lamp by its base, insert it firmly and squarely into the lamp housing.
8. Gently re-insert the lamp, without winding the wires around the lamp.

If you are installing the Osram HQI-R 150W lamp, note that the lamp may not be operated in any position other than horizontal. When the lamp is installed in the fixture, turn it so that the wires will point towards the ground when the fixture is permanently installed. This positions the filament in the ideal horizontal burning position. If this is not done, lamp life and performance will be reduced.



9. Connect the wires on the new lamp to the connecting plug.
10. Replace the lamp cover-plate, re-insert and tighten the screws.
11. Replace the fixture housing.

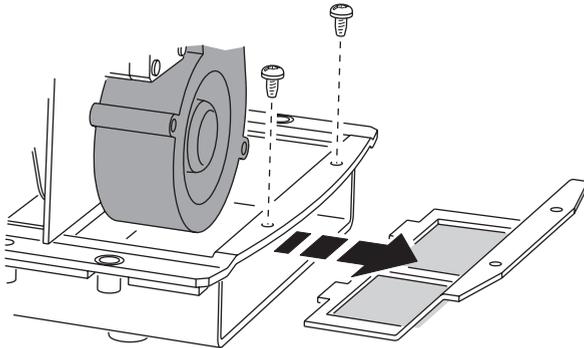
CLEANING

Wipe off loose dirt with a damp cloth. Clean the housing with a soft brush or sponge and a mild, non-abrasive car washing detergent.

Cleaning the fan and air filter

To maintain adequate cooling, dust must be cleaned from the fan and air filter periodically. Cleaning intervals can vary widely between different locations. Check regularly for signs of dust and dirt buildup, and clean as necessary.

1. Disconnect the fixture from power and allow to cool.
2. Remove the fixture housing using a 2mm Allen wrench.
3. To remove the air filter, take off the fixture housing, and then remove the two screws as shown in the following illustration.



4. Remove dust and dirt from the fan blades and air filter using a soft brush, cotton swab, vacuum, or compressed air.
5. Replace the fixture housing.

The air filter is glued to its support, so washing it is not advised. We recommend the installation of a new air filter (P/N 62400205) when the lamp is replaced.

FUSE REPLACEMENT

Warning! *Never replace fuses with ones of a different rating!*

The FiberSource B150 has three fuses. The main fuse is located on the small circuit board and the secondary fuses for the low-voltage power supplies are located on the main circuit board.

Fuse replacement requires a 5 mm Allen wrench.

To replace a fuse:

1. Isolate the FiberSource B150 from AC power and allow it to cool completely.
2. Remove the fixture housing.
3. Locate the main fuse, which can be found by following the power cable to the smaller of the two printed circuit boards. This is located just to the side of the lamp housing. The mains fuse is a T 3.15 amp, high I2t, 250 volt fuse. Replace the defective fuse with one of the same size and rating.
4. Replace the fixture housing before applying power.

TROUBLESHOOTING

Problem	Probable cause(s)	Remedy
No response from fixture when power is applied.	No power to fixture.	Check power cables.
	Primary fuse blown.	Replace fuse.
	Secondary fuse blown.	Replace fuse.
No light, lamp cuts out intermittently, or burns out too quickly.	Lamp missing or blown.	Disconnect fixture and replace lamp.
	Fixture or lamp is too hot.	Check fans and filter. Clean fans and replace filter if necessary. If problem persists, contact service technician.
	Incorrect power supply setting.	Check setting.
Poor or uneven light.	Fiber Adaptor installed incorrectly.	Refer to Fiber Adaptor Installation Note.
	Rough fiber ends.	File fiber ends smooth as described in Fiber Adaptor Installation Note.
	UV filter in fiber port dirty.	Check and clean if necessary.
	Osram lamp filament oriented incorrectly.	Turn lamp so wires point toward the ground.
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 around the fixture. Clean the fan and replace the air filter.

FIBERSOURCE B150 SPECIFICATIONS

Physical

Length	398 mm (15.7 in)
Width	195 mm (7.7 in)
Height	192 mm (7.6 in)
Weight	7.8 kg (17.2 lbs)

Source

Lamp	150 W discharge
Approved models	Philips MasterColor CDM-SA/R 150W Osram HQI-R 150W
Control	Remote switchable

Installation

Minimum distance to combustible materials	.0.1 m (4 in)
Mounting points	5 x 13 mm (0.5 in) holes
Minimum clearance around fan and air vents	.0.2 m (8 in)
Environment	Dry or damp location
Orientation	Horizontal

Construction

Housing	Flame retardant ABS plastic
Color	RAL 7016, antrazit-gray
Ingress protection factor	IP 44

Thermal

Maximum ambient temperature (Ta)	40° C (104° F)
Maximum surface temperature, steady state, Ta=40° C	70° C (158° F)
Cooling	Filtered forced-air cooling system

AC Supply

AC input	1.8 m trailing cable w/o cord cap
Power supply options	100/120/210/230/250 V, 50/60 Hz
Primary fuse	3.15 A, high I ² t, 250 V

Maximum power and current

100 V, 60 Hz	188 W, 2.0 A
120 V, 60 Hz	190 W, 1.7 A
208 V, 50 Hz	180 W, 1.0 A
230 V, 50 Hz	184 W, 1.0 A
250 V, 50 Hz	197 W, 1.0 A

Ordering information

FiberSource B150, 230V, 50Hz P/N 90523400
FiberSource B150, 120V, 60Hz P/N 90523300

Included items

User manual P/N 35000162
Philips MasterColor CDM-SA/R 150W lamp P/N 97010113

Accessories

Fiber adaptor, 350-800 pcs. (50 pcs. interval) Ø1mm fiber, D=38mm P/N 91611034
Fiber adaptor, 75-350 pcs. (25 pcs. interval) Ø1mm fiber, D=30mm P/N 91611035
Philips MasterColor CDM-SA/R 150W lamp P/N 97010113
Osram HQI-R 150W lamp P/N 97010101
Air filter P/N 62400205



www.martin-architectural.com • Olof Palmes Allé 18 • 8200 Aarhus N • Denmark
Tel: +45 8740 0000 • Fax +45 8740 0010