
6 Inserting and Removing the Light Guide

1. Make sure that power is off to the X-Cite 120 unit.
2. Ensure that the protective end caps are removed from both the input and output ends of the light guide prior to installation.
3. Insert the light guide into the light guide retainer located on the back panel of the unit. Push the light guide in until it seats with a second positive "click".



Tip: When the light guide is fully inserted, the line on the light guide insertion label will be right up against the light guide port.

Note: If the light guide is not inserted properly, it may result in reduced light output and overheating which can cause premature degradation of the light guide.

4. During installation or removal, grasp the light guide on the strain-relief nearest the input end of the light guide.

Note: never grip the light guide during installation or removal in a place other than the strain relief portion of the light guide.

5. To remove the light guide, firmly grip the strain relief near the light guide retainer and pull out firmly.

Note: the X-Cite 120 is designed for use with a 3mm liquid light guide. EXFO Life Sciences & Industrial Division can not guarantee the performance of the X-Cite if using light guides other than those supplied by EXFO Life Sciences & Industrial Division.

6.1 Tips to prevent premature degradation of light guides



Liquid light guides have a typical useful life of 2-3 years in the X-Cite 120 when installed and handled properly. The formation of bubbles is one of the most common reasons for a light guide to degrade prematurely and result in a sudden reduction in illumination intensity. Bubbles form without warning, usually due to overheating and/or mechanical stress to the light guide. Below are some simple tips to avoid overheating and stressing the light guide.

1. Make sure the light guide is cooled properly during use, and prevent overheating:
 - a. Always fully insert the light guide in to the X-Cite unit; this ensures contact with a heat sink to conduct heat away from the light guide.
 - b. Never obstruct the air vents on the X-Cite unit. Vents are located at the rear and underside of the unit. (Note: In earlier X-Cite models vents were located on the side, underneath the lamp access panel.)
 - c. Do not remove the rubber feet on the X-Cite unit or otherwise reduce/block the space between the bottom of the unit and benchtop. This may compromise airflow through the unit.
 - d. Ensure that the air being used to ventilate the X-Cite unit is approximately "room temperature" (e.g. do not place the X-Cite unit on top of another heat-producing instrument).
 - e. If a heated environmental chamber is being used for live cell imaging, make sure that the X-Cite unit and the light guide are located outside of the chamber.
2. Do not expose the light guide to extreme temperatures (above 35°C, below -5°C) for extended periods of time during use, transport or storage; this may cause degradation of the seals and allow air bubbles to form in the liquid.
3. Never kink, bend, crush, or stretch the light guide; this type of mechanical stress may cause bubbles to form in the liquid and/or damage to the outer sheath
 - a. Always allow adequate clearance at the rear of the X-Cite unit to prevent excessive bending
 - b. Place the X-Cite unit close enough to the microscope so that there is some slack in the light guide and no sharp bends.
4. Never leave an endcap on the output end of the light guide when the other end is connected to the X-Cite unit; if the unit is turned on in this condition, the cap will overheat, melt and/or permanently discolour the quartz end of the light guide.
5. While the X-Cite unit is on but not in actual use (i.e. during sample preparation, or between timelapse timepoints) close the iris/shutter on the X-Cite; this reduces unnecessary UV photon load on the liquid light guide. (Using only the shutter/stop in the microscope itself protects the specimen, but energy is still passing through the light guide.