InvisiLight® ILU
EZ-Connect™ Module

Installation Instructions

Revision 1.0

SAFETY

Make sure to comply with your employer or contractor training and safety procedures and all government safety regulations. The adhesive used with the InvisiLight® Solution may cause allergic skin reaction. Wear protective gloves and safety goggles and avoid breathing vapors. Do not look into any fiber optic connector as eye damage may result.

DISCLAIMER

This installation instruction is furnished on an "as is, where is" basis. OFS disclaims any and all liability, representation or implied, regarding this instruction, its content and use to the fullest extent permitted by law.

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1.0 Module Overview

The OFS InvisiLight® ILU (Indoor Living Unit) EZ-Connect Module simplifies in-home InvisiLight ILU installations. The Module features a 2-layer spool, enabling payout of the pre-connectorized micro-drop and jumper in two different directions, eliminating the need for a final connection to the ONT. The InvisiLight ILU solution enables nearly invisible, fast, plug and play fiber placement into living units to connect FTTH services to subscribers.

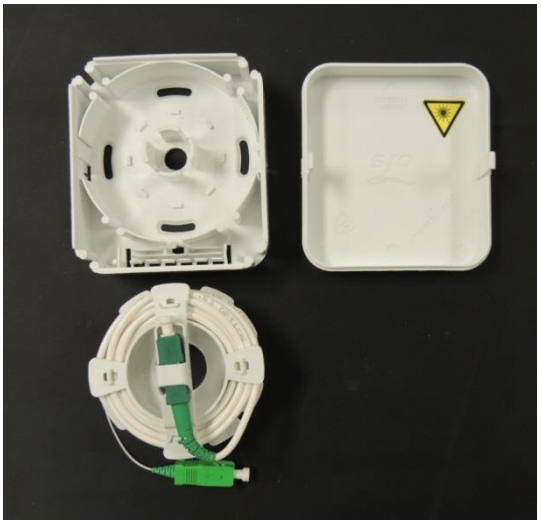
This instruction is an addendum to OFS installation document D12AK0148, InvisiLight Installation Instructions, and covers the installation of the EZ-Connect Module only. Please refer to document D12AK0148 for more detailed installation instructions for the ILU micro-drop.

2.0 . Tools and Components

Tools for the module installation only. See document D12AK0148 for a complete list of suggested tools to install the InvisiLight ILU micro-drop.

Tape measure
Portable drill – 3/16” bit
Small Phillips-head screwdriver

2.1 Components



EZ Connect two-layer spool assembly with factory installed SC-A connectors. Components consist of the base, spool, and cover.

Side view of the EZ Connect two-layer spool assembly. The lower layer includes the 900 µm micro-drop. The upper layer includes the shorter-length jumper layer that will be plugged into the ONT.

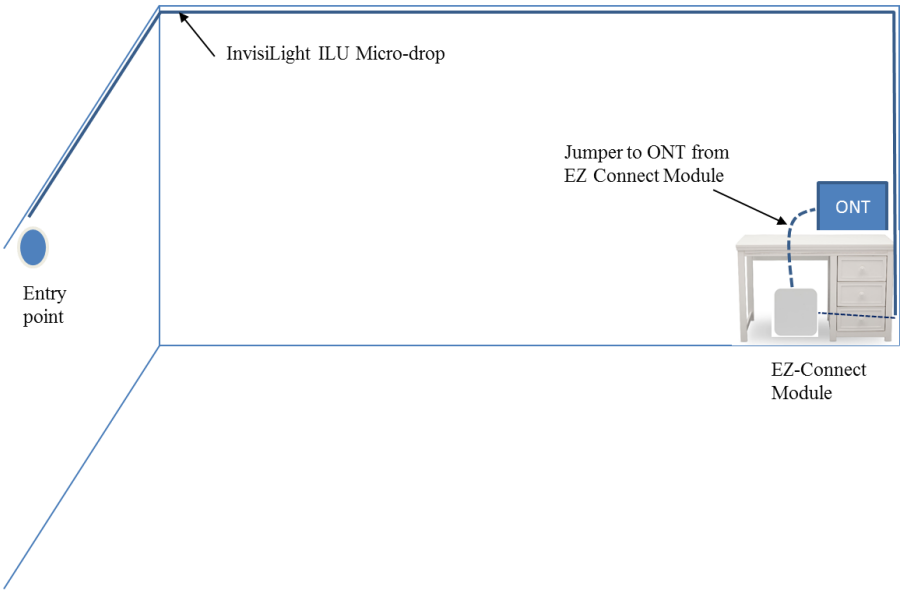
3.0 Installation Procedure

3.0 Survey Residence and Determine Placement Strategy

3.0.1 Identify location of Fiber Entry Point.

3.0.2 Identify the lengths of InvisiLight ILU micro-drop and jumper contained in the module. These lengths are identified in the product code on the package. For example, NVSLGHTDD-SCASCA-1-NAM-KIT 2MM-2.5M/40M, identifies that the module contains 2.5m of 2mm cord as the jumper length, and 40m of InvisiLight ILU micro-drop.

3.0.3 Determine approximate desired location of the ONT and wall-mount module, per the illustration below.



Note: The micro-drop length must be longer than the distance from Fiber Entry Point to the module. A good practice is to use the next larger size if the measured distance is within 3 meters of the micro-drop length. The jumper length must be longer than the distance from the module to the ONT.

3.1 EZ-Connect Module Mounting

3.1.1 Identify a space on a wall within the appropriate distance of the desired ONT location.

3.1.2 Secure the Module to the living unit wall with screws or double sided tape. If securing with drywall anchors, a 3/16" drill bit is the proper size for the hole for the anchors. Unless the wall material is very weak, the module is light enough (<1 lb.) that it does not need to be directly screwed into a wall stud. Do not snap on EZ-Connect Module cover at this point in the process.

EZ Connect module base installed with screws on a wall

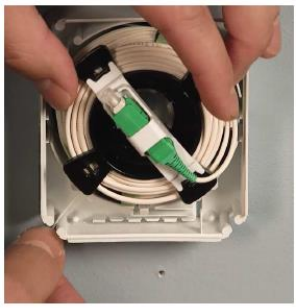
CAUTION: Prior to drilling check to be sure there are no electrical wires, pipes, or any other obstacles that may be in the path of the drill. If such obstacles are present move the drilling location to where no obstacles exist.

3.2 Prepare the pathway and install the micro-drop

3.2.1 Prepare the fiber installation path between the fiber entry point and the EZ-Connect module location. For more information about the micro-drop pathway preparation and installation process, please see document D12AK0148.

3.2.2 Place the spool on to the EZ-Connect module flange and verify that it spins freely. See the pictures below showing the process of spooling out the 900 µm micro-drop.

Step 1: Fix the spool in the module



Step 2: Prepare the fiber to pass through a corner

Step 3: Spool out the 900um fiber

3.2.3 The spool has two positions in the module. The first position allows the spool to spin freely for placement of the micro-drop on the bottom layer. The second position (found by pressing the spool firmly onto the module base) locks the spool to allow for the unwinding of the jumper on the top layer. If the spool has bottomed out (locked) and will not spin on the module base, lift the spool back to the first stop to allow the spool to spin for placement of the micro-drop on the bottom layer of the spool. Carefully remove the tape holding the outside end connector to the spool, and unspool the fiber connector along the selected route.

Unspooling the 900 µm micro-drop

Continue the installation process per the process outlined in OFS installation document D12AK0148 until the fiber is adhered to the surface approximately 1 meter from the module.

3.3 Wall Module Assembly

3.3.1 Adhere micro-drop to a point approximately 1 meter (3 feet) from the wall module. If not already in place, place the spool in the module and take up remaining slack onto the spool. Adhere micro-drop up to the entry point into the module. Once the micro-drop is fully adhered, slightly rotate the spool and press it into the module until it is locked in place so the top jumper layer can be unwound from the spool.

Micro-drop adhered to the wall near the module. Rotate the spool to take up remaining slack and ahere to the entry point.

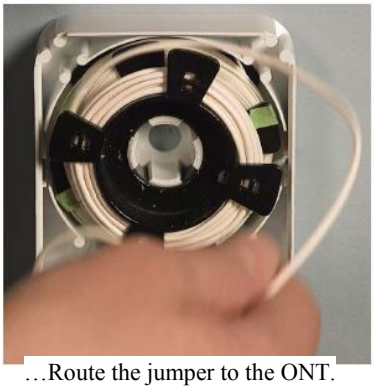
Slightly rotate the spool and press into the module to lock it in place.

Note: For those situations where the micro-drop needs to be placed on an open wall to the module, consider fishing the micro-drop down the wall behind the module, and cover the hole in the wall with a hole cover.

3.3.2 Remove the connector from the retainer. The top jumper layer can then be unwound from the spool. The connector can either be placed in the parking slot of the module or routed to the ONT.

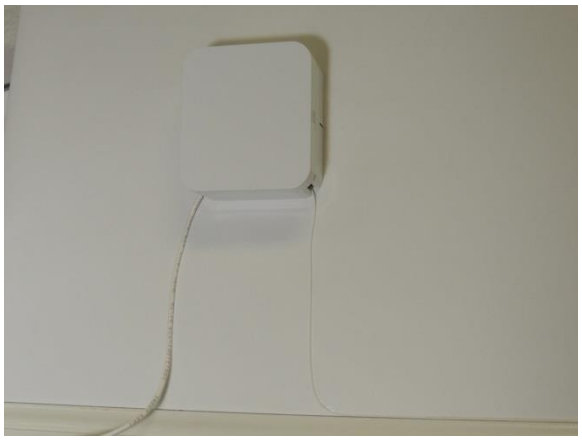
Remove the connector from the top retainer.

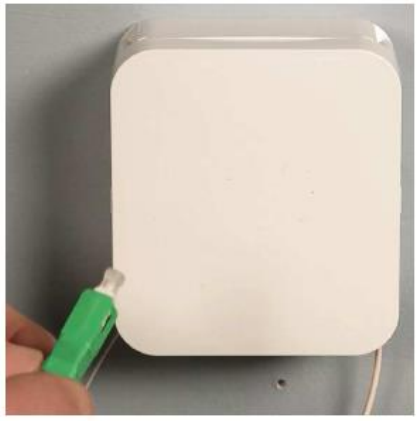
Either place the connector in the parking slot or…



…Route the jumper to the ONT.

3.3.3 Place the cover on the module and plug the jumper into the ONT for final assembly.





The module with cover closed.

4 Testing

4.1.1 No active OLT - Use a power meter to record optical insertion loss of the installed EZ-Bend InvisiLight micro-drop assembly using company established testing procedure, between the fiber entry point adapter and into the connector of the EZ Connect jumper.

4.1.2 Active OLT, Option A – Measure the received power (dBm) at the fiber entry point adapter and at the jumper side of the EZ Connect jumper. The difference is the insertion loss of the installed EZ-Bend InvisiLight assembly.

4.1.3 Active OLT, Option B –Connect an EZ-Bend Jumper from the Wall Mount Module to the ONT. If the green light on the ONT is illuminated, installation passes testing.

5 Troubleshooting and Repair

5.1 If test results show excessive loss, inject a “red light” into the connector on either end of the Micro-Drop and the red light will visibly leak at any point where excessive loss or a fiber break exists.

5.2 If the fiber is broken in a section more than about 0.5 meters (1.5 feet) from a connector, replace the InvisiLight micro-drop.

5.3 If the fiber is broken in a section less than about 0.5 meters (1.5 feet) from a connector, cut off the connector and replace it with an OFS fusion splice-on, OFS mechanical connector, or other company approved field installable connector.

5.4 If the fiber is broken near the wall module and there is sufficient slack on the spool the slack may be pulled past the break and the broken end may be fusion spliced to the slack end. The fusion splice should be attached (use adhesive) to the wall or molding, and the remaining slack rolled back onto the

spool and attached to the wall or molding with adhesive. An alternative method to hide the splice is to drill a hole, drop the splice into the hole, and use a plug and cap to conceal it.

6.0 Ordering Information

Please refer to OFS Document Number fap-312, available at www.ofsoptics.com.

For additional information, please contact your sales representative.

You can also visit our website at www.ofsoptics.com, or call 1-888-fiberhelp (1-888-342-3743) inside the USA or 1-770-798-555 from outside the USA.