

IEC 60794-1-21 – Optical Fibre Cables –Part 1-21: Generic Specification – Basic Optical Cable Test Procedures –Mechanical Test Methods- Method E3A: Crush

Description

5 Method E3: Crush

5.1 Object

The purpose of this test is to determine the ability of an optical fibre cable to withstand crushing for long term and for short-term loads.

NOTE Method E3A corresponds to the default method, Method E3 Crush, defined in IEC 60794-1-2:2013.

5.2 Sample

The sample shall be of a length sufficient to carry out the specified test.

5.3 Method E3A: Plate/plate

5.3.1 Apparatus

The apparatus shall allow a sample of cable to be crushed between a flat steel base plate and a movable steel plate which applies the crushing force uniformly over a 100 mm length of the sample. The edges of the movable plate shall be rounded with a radius of about 5 mm. The edges are not included in the 100 mm flat part of the plate. A suitable apparatus is shown in Figure 5.

5.3.2 Procedure

The cable sample shall be mounted between the plates so that lateral movement is prevented, and the force shall be applied gradually without any abrupt change. If the force is applied in incremental steps, these shall not exceed a ratio of 1,5:1.

The force shall be maintained stable at the specified test value at a specified time. This time is typically 1 min (short-term) or 10 min (long-term) if not specified in the detail specification. Attenuation measurement shall be performed before the force is released.

Unless otherwise specified in the detail specification, the test shall be performed three times, the force being applied on the specimen at three different places, without rotating the cable. The distance between each crush shall be not less than 500 mm apart and different from the lay length of the cable core.

Unless otherwise specified, the conditions for testing shall be in accordance with standard atmospheric conditions.



Crush Tester for Optical Cable According to IEC 60794-1-2/ E3

- Loading speed 0-200 mm/min
- Crosshead travel 200 mm
- Load measuring C3 class loadcell
- Displacement measurement
- Software is included
- Graphing and saving all data of force and displacement on Windows-based software
- Report in MS Excel
- Connection to computer is USB port
- The computer is not included
- Loading plate according to the standard

Category

1. Equipment for Standards
2. Standards