



INTERNATIONAL STANDARD



**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 3-53: Examinations and measurements – Encircled angular flux (EAF) measurement method based on two-dimensional far field data from step index multimode waveguide (including fibre)**

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	6
4 Standard atmospheric conditions	7
5 Apparatus.....	7
5.1 General.....	7
5.2 Measurement method 1: $f\theta$ lens imaging	8
5.2.1 General	8
5.2.2 Micro-positioner	8
5.2.3 FFP optical system	8
5.2.4 Camera.....	8
5.2.5 Computer (EAF analyser module).....	9
5.2.6 Calibration light source	9
5.3 Measurement method 2: direct imaging.....	9
5.3.1 General	9
5.3.2 Micro-positioner	9
5.3.3 Optical power.....	9
5.3.4 Alignment	9
5.3.5 Detector.....	9
5.3.6 Single-mode fibre.....	10
5.3.7 Imaging device.....	10
6 Sampling and specimens	11
7 Geometric calibration.....	11
8 Measurement procedure	12
8.1 Safety.....	12
8.2 Far field image acquisition.....	12
8.2.1 General	12
8.2.2 Waveguide end-face alignment.....	12
8.2.3 Light source image acquisition	12
8.3 Removal of background noise.....	13
8.4 Centre determination.....	13
8.4.1 General	13
8.4.2 Method A: Optical centre determination	13
8.4.3 Method B: Mechanical centre determination.....	14
8.5 Computation of encircled angular flux	14
9 Results.....	16
9.1 Information available with each measurement.....	16
9.2 Information available upon request	16
10 Details to be specified	16
Annex A (informative) System requirements: measurement method 1 – Field optical system	18
A.1 General.....	18
A.2 Requirements.....	18
Annex B (informative) System requirements: measurement method 2 – Direct imaging.....	19
B.1 General.....	19

B.2	Requirements.....	19
	Bibliography	20
Figure 1	– Apparatus configuration: Measurement method 1: $f\theta$ lens imaging	8
Figure 2	– Far field optical system diagram	8
Figure 3	– Apparatus configuration: measurement method 2 – Direct imaging using an integrating sphere.....	10
Figure 4	– Apparatus configuration: measurement method 2 – Direct imaging using a single-mode fibre	10
Figure 5	– Apparatus configuration: measurement method 2 – Direct imaging using an imaging device	11
Figure 6	– Calibration apparatus example.....	12
Figure 7	– Acquired far field image.....	13
Figure 8	– Acquired far field image with false colour	13
Figure 9	– Optical centre determination	14
Figure 10	– Coordinate conversion to polar coordinate on the image sensor plane	15
Figure 11	– Standard encircled angular flux chart	16
Figure A.1	– An example of an optical system using an $f\theta$ lens.....	18

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FOREWORD

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International Standard IEC 61300-3-53 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/3850/FDIS	86B/3875/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61300 series, published under the general title, *Fibre optic interconnecting and passive components – Basic test and measurement procedures*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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1 Scope

This part of IEC 61300 is intended to characterize the encircled angular flux of measurement step index multimode waveguide light sources, in which most of the transverse modes are excited. The term waveguide is understood to include both channel waveguides and optical fibres but not slab waveguides in this standard.

Encircled angular flux (EAF) is the fraction of the total optical power radiating from a step index multimode waveguide's core within a certain solid angle. The EAF is measured as a function of the numerical aperture full angle. The basic approach is to collect, for every measurement, two dimensional far field data using a calibrated camera and to convert them mathematically into encircled angular flux.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*