TECHNICAL REPORT

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Single-mode optical fibres – Raman gain efficiency measurement using continuous wave method – Guidance

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FOREWORD

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IEC/TR 62324, which is a technical report, has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2003. It constitutes a technical revision.

This second edition differs from the first in that in the previous edition, in the paragraph before Figure 2, there was an approximation of the relationship between wavelength and optical frequency that led to some inconsistencies in interlaboratory agreement. This approximation has been removed.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
86A/1058/DTR	86A/1072/RVC

Full information on the voting for the approval of this technical report 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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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- withdrawn,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.

SINGLE-MODE OPTICAL FIBRES – RAMAN GAIN EFFICIENCY MEASUREMENT USING CONTINUOUS WAVE METHOD – GUIDANCE

1 Scope and object

This technical report is applicable to the Raman gain efficiency measurement of a single-mode transmission optical fibre. It is useful in assessing the fibre's performance in Raman amplified transmission systems.

This technical report describes a method that uses two unmodulated continuous waves to measure the Raman gain efficiency of a single-mode transmission optical fibre. This parameter assesses the fibre's efficiency at converting input pump power to information signal power.

2 Normative references

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

IEC 60793-1-22, *Optical fibres – Part 1-22: Measurement methods and test procedures – Length measurement*

IEC 60793-1-40, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

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

IEC 60825-2, *Safety of laser products – Part 2: Safety of optical fibre communication systems*