



IEC 62496-4-214

Edition 1.0 2020-05

INTERNATIONAL STANDARD

**Optical circuit boards –
Part 4-214: Interface standards – Terminated waveguide OCB assembly using
a single-row thirty-two-channel symmetric PMT connector**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.180.01

ISBN 978-2-8322-8307-3

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

| | |
|---|----|
| FOREWORD | 3 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Description | 5 |
| 5 Interface dimensions of thirty-two-channel for the assembly, guide pins and clamp spring | 6 |
| Annex A (informative) Dimensions of an example of components for the assembly | 10 |
| A.1 Symmetric PMT connector | 10 |
| A.2 Waveguide OCB | 11 |
| Annex B (informative) Dimensions of an example of a single-row thirty-two-channel MT ferrule | 13 |
| Bibliography | 16 |
| Figure 1 – Interconnection between the assembly and the MT connector | 6 |
| Figure 2 – Interface dimensions of thirty-two-channel for the assembly | 6 |
| Figure 3 – Interface views of thirty-two-channel for the assembly | 7 |
| Figure 4 – Interface views of the guide pin | 8 |
| Figure 5 – Interface views of the clamp spring | 8 |
| Figure A.1 – An example of components of the symmetric PMT connector | 10 |
| Figure A.2 – Expanded view of end-face for an example of the single-row thirty-two-channel PMT body | 11 |
| Figure A.3 – Positions of the example of thirty-two channel ports of OCB | 12 |
| Figure B.1 – Interface dimensions of an example of single-row thirty-two-channel MT ferrule | 13 |
| Figure B.2 – Interface views of an example of single-row thirty-two-channel MT ferrule | 14 |
| Table 1 – Interface dimensions of thirty-two-channel for the assembly | 7 |
| Table 2 – Positions of cores of thirty-two-channel for the assembly | 7 |
| Table 3 – Interface dimensions of the guide pin | 8 |
| Table 4 – Interface dimensions of the clamp spring | 9 |
| Table A.1 – Interface dimensions of an example of the single-row thirty-two-channel for PMT body | 11 |
| Table A.2 – Positions of cores for an example of the thirty-two-channel ports of OCB | 12 |
| Table B.1 – Interface dimensions of an example of single-row thirty-two-channel MT ferrule | 14 |
| Table B.2 – Fibre hole positions of an example of single-row thirty-two-channel MT ferrule | 15 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL CIRCUIT BOARDS –

Part 4-214: Interface standards – Terminated waveguide OCB assembly using a single-row thirty-two-channel symmetric PMT connector

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62496-4-214 has been prepared by IEC technical committee 86: Fibre optics.

The text of this International Standard is based on the following documents:

| CDV | Report on voting |
|------------|------------------|
| 86/563/CDV | 86/564/RVC |

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

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

A list of all parts in the IEC 62496 series, published under the general title *Optical circuit boards*, can be found on the IEC website.

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

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

OPTICAL CIRCUIT BOARDS –

Part 4-214: Interface standards – Terminated waveguide OCB assembly using a single-row thirty-two-channel symmetric PMT connector

1 Scope

This part of IEC 62496 defines the standard interface dimensions for a terminated waveguide optical circuit board (OCB) assembly (referred to simply as "assembly") using single-row thirty-two-channel connectors for polymer waveguides connected with a symmetric PMT connector.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 62496-1, *Optical circuit boards – Part 1: General*

IEC 62496-4, *Optical circuit boards – Part 4: Interface standards – General and guidance*