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Optics and photonics — Preparation of drawings for optical elements and systems — Surface imperfection specification and measurement systems

Optique et photonique — Préparation des plans pour les éléments et systèmes optiques — Spécification des imperfections de surface et systèmes de mesure

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Foreword

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Introduction

ISO 10110-7 provides a notation for the indication of the level of acceptability of surface imperfections of optical elements and optical assemblies. It provides two systems of drawing notations for permissible imperfections: one based on area and size of imperfections and the other based on the visibility or appearance of imperfections.

ISO 14997 provides test methods for these two systems of drawing notation.

These two systems of specification and verification are totally different, with different accumulation and acceptance rules. As a result, a user who is only familiar with one of the systems can become confused when needing to interpret specifications in the other system. There is no way to translate a specification in one system into a specification in the other system because their criteria for acceptability are not interchangeable. The size or area of an imperfection is not correlated with its visibility or brightness.

It is, however, possible to provide a specification in each system which results in practically the same yield loss for large numbers of optical components.