ICS 37.040.10
CCS N 43

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46573-2025

Industrial lenses - Classification and interface dimensions

工业镜头 分类与接口尺寸

Issued on: October 31, 2025 **Implemented on: May 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Photographic Machinery (SAC/TC107). This document was drafted by: Hangzhou Hikrobot Co., Ltd., Hunan Changbudao Optical Technology Co., Ltd., and Jiaxing Zhongrun Optoelectronics. Shenzhen Canrui Technology Co., Ltd., Guangdong Sirui Optics Co., Ltd., and Hangzhou Lingxi Robotics Intelligent Technology Co., Ltd. Limited Liability Company, Guangdong Anda Intelligent Equipment Co., Ltd., Shenzhen Dushen Technology Co., Ltd., Fujian Haolan Optoelectronics Co., Ltd., and Boda Vision (Xiamen) Technology Co., Ltd., Zhongshan Guangda Optical Instrument Co., Ltd., Zhongshan Gree Intelligent Manufacturing Optics Co., Ltd., Dongguan Kepuda Optics Electronics Technology Co., Ltd., Shenzhen Dongzheng Optical Technology Co., Ltd., Fujian Youenli Optoelectronic Technology Co., Ltd., Shaanxi Weishi Intelligent Manufacturing Technology Co., Ltd. Technology Co., Ltd., Hangzhou Photographic

Machinery Research Institute Co., Ltd., Zhongguancun Pan-Asia Machine Vision Technology Industry Alliance, Hangzhou Guozhao Testing Technology Co., Ltd. Technology Co., Ltd., Sichuan Guochuang Innovation Vision Ultra HD Video Technology Co., Ltd., Beijing Lingbang Intelligent Equipment Co., Ltd., Chongqing Mairuizhi Technology Co., Ltd. Limited Liability Company, Guangzhou Zhongyun Standard Technology Service Co., Ltd. The main drafters of this document are. Zhang Zhenhua, Bai Zhen, Zhang Wencong, Li Bingchuan, Chen Mingyong, Li Jie, Wang Zheng, Fan Hua, Qiu Jian, Ge Shiqing, and Xu Zhijun. Li Tongyue, Lin Zheng, Wu Nanhai, Zhang Youliang, Jin Jian, Wang Jian, Yang Zhiquan, Shen Qingmei, Wang Bo, Pan Jin, Hu Lihua, Liu Juan, Yu Xiujuan, Huo Yun Cheng Yifan, Song Xiaomin, Cui Zhongwei, Lei Zhenghong, Tan Jianqiang, Ding Xiaobiao. Industrial Lens Classification and Interface Size

1 Scope

GB/T 46573-2025 is the Chinese national standard covering the machine vision lens - the classification by focal length and format, and the mount dimensions and flange distances of C, CS and the larger mounts, which is what decides whether a lens and a camera from two suppliers will actually focus. First edition, under the China Machinery Industry Federation, in force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document defines the terminology for industrial lenses, provides a classification of industrial lenses, and specifies the interface dimensions for industrial lenses. This document applies to the design, production, and trade of industrial lenses.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 196 Basic Dimensions of Ordinary Threads

GB/T 197 Tolerances for Standard Threads

GB/T 13964 Photographic Machinery Terminology

3 Terms and Definitions

The terms and definitions defined in GB/T 13964 and the following terms and definitions apply to this document.

3.1 industrial lenses Lenses suitable for industrial imaging systems, meeting the application needs of different machine vision scenarios.

3.2 telecentric lens Lenses with entrance pupil and/or exit pupil located at infinity, principal rays parallel to the optical axis, and employing telecentric optical paths or telecentric optical systems.

3.3 Lenses with constant working distance and magnification.

3.4 Zoom Lens An optical lens with a constant working distance, which allows the magnification to vary within a certain range by moving a single lens or a group of lenses.

3.5 Turning angle lens The object plane and the image plane are at 90° to each other, and the lens is folded by adding a folding accessory or the internal optical path of the lens.

4 Industrial Lens Classification

4.1 Overview Industrial lenses are classified as shown in Table 1.