

# Diffraction Optical Element Market by Beam Splitter, Pattern Generator, Diffuser, Lenses, Multilevel DOE, AR/VR, LIDAR, Laser Material Processing, Biomedical Devices, Holography, Spectroscopy, Metrology & Industrial Inspection - Global Forecast to 2030

<https://marketpublishers.com/r/DF69768F679AEN.html>

Date: October 2024

Pages: 222

Price: US\$ 4,950.00 (Single User License)

ID: DF69768F679AEN

## Abstracts

The global diffractive optical element market is expected to reach USD 388.7 million in 2030 from USD 220.9 million in 2024, at a CAGR of 9.9% during the forecast period. The demand for consumer electronics, telecommunication technologies, healthcare tools, and material processing has increased, which requires manipulating light within confined form factors. In addition, DOEs offer the unique advantages of splitting, shaping, and controlling light with high precision and are less expensive to manufacture in large quantities than traditional optics. Moreover, the area of laser applications, from 3D sensing in smartphones to laser surgery in healthcare, pushes DOEs forward as mass solutions.

“Diffusing Materials segment is expected to dominate during the forecast period.”

Diffusing materials are expected to dominate the diffractive optical element market segment. These materials, like optical diffusers, ensure a uniform illumination field with minimal effects of artifacts in optics. Such elements are applied in consumer electronics by improving the quality of monitors and illuminating systems by evenly spreading light and minimizing glare. In material processing, diffusing elements ensure constant profiles for a laser beam to accurately cut and weld the material. In healthcare, they help achieve uniform illumination for imaging and other diagnostic systems.

“Consumer Electronics segment is expected to grow at highest CAGR in diffractive optical element market.”

Consumer electronics has the highest growth rate in the diffractive optical element market. As devices become more complex for consumers, there is an ever-growing demand for more sophisticated optical technologies to create facial recognition, augmented reality, and high-quality images in extremely compact form factors. Other innovational changes and a pace of development in smartphones, tablets, wearables, etc., further challenge the boundaries of optical technology to be raised by DOEs to meet these new standards.

“The Asia Pacific is projected to dominate the diffractive optical element market.”

Asia Pacific region is dominating due to its strategic advantage in manufacturing, technological innovation, and economic growth. Established electronics and semiconductor manufacturing companies are present in China, Japan, and South Korea. This creates demand for the manufacturing of DOEs, to provide the required solutions with advanced optical components. The growing consumer electronics and telecommunications industry, along with high investment in health care, drives demand for DOEs.

By Company Type: Tier 1 – 45%, Tier 2 – 30%, and Tier 3 – 25%

By Designation: Directors – 40%, Managers – 35%, and Others – 25%

By Region: North America– 45%, Europe – 25%, Asia Pacific– 20% and RoW-10%

Zeiss Group (Germany), AGC Inc (Japan), Cohernet Corp (US), Jenoptik (Germany), HOLO/OR Ltd (Israel), Broadcom (US), Nalux Co., Ltd (Japan), Holoeye Photonics AG (Germany), Nissei Technology Corp (Japan), Sintec Optronics Ltd (Singapore), are some of the key players in the diffractive optical element market.

The study includes an in-depth competitive analysis of these key players in the diffractive optical element market, with their company profiles, recent developments, and key market strategies.

## Research Coverage

This research report categorizes the diffractive optical element market by type

*Diffractive Optical Element Market by Beam Splitter, Pattern Generator, Diffuser, Lenses, Multilevel DOE, AR/V...*

(Diffractive Beam Splitter, Diffractive Pattern Generator, Diffractive Beam Shaper/Diffusers (Flat Top, Line Top, and Spot Array), and Others), by component (Binary/Multilevel DOE, Diffractive Lenses, Diffusing Materials, Gratings), by application (AR/VR, Rapid Optical Prototyping, Aberration Correction, Lightweight Optics, Illumination Systems, Spectroscopy, Imaging and Sensing, Laser Material Processing, Lidar, Biomedical Devices, Holography, Metrology and Industrial Inspection, and Others), by end user (Consumer Electronics, Automotive, Aerospace & Defense, Healthcare, Semiconductor, IT & Telecommunication, Industrial, and Others) and by region (North America, Europe, Asia Pacific, and RoW). The report's scope covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the diffractive optical element market. A detailed analysis of the key industry players has been done to provide insights into their business overview, solutions, and services; key strategies; Contracts, partnerships, agreements, new product & service launches, mergers and acquisitions; and recent developments associated with the diffractive optical element market. This report covers the competitive analysis of upcoming startups in the diffractive optical element market ecosystem.

### Reasons to buy this report

The report will help market leaders and new entrants with information on the closest approximations of the revenue numbers for the overall diffractive optical element market and its subsegments. It will also help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Analysis of key drivers (advancements in laser technology, increasing use of medical devices, rising growth in optical communication), restraints (competition from alternative technologies), opportunities (emerging application in augmented reality, and virtual reality, rising demand for automotive heads up display), and challenges (uncertainty in DOE fabrication, high manufacturing cost) influencing the growth of the diffractive optical element market

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the

diffractive optical element market

**Market Development:** Comprehensive information about lucrative markets – the report analyses the diffractive optical element market across varied regions.

**Market Diversification:** Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the diffractive optical element market

**Competitive Assessment:** In-depth assessment of market shares, growth strategies and service offerings of leading players like Zeiss Group (Germany), AGC Inc (Japan), Cohernet Corp (US), Jenoptik (Germany), HOLO/OR Ltd (Israel), Broadcom (US), Nalux Co., Ltd (Japan), Holoeye Photonics AG (Germany), Nissei Technology Corp (Japan), Sintec Optronics Ltd (Singapore), among others in the diffractive optical element market.

## Contents

### 1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED AND REGIONAL SCOPE
  - 1.3.2 YEARS CONSIDERED
  - 1.3.3 INCLUSIONS AND EXCLUSIONS
- 1.4 CURRENCY CONSIDERED
- 1.5 UNIT CONSIDERED
- 1.6 LIMITATIONS
- 1.7 STAKEHOLDERS

### 2 RESEARCH METHODOLOGY

- 2.1 RESEARCH DATA
  - 2.1.1 SECONDARY AND PRIMARY RESEARCH
  - 2.1.2 SECONDARY DATA
    - 2.1.2.1 List of key secondary sources
    - 2.1.2.2 Key data from secondary sources
  - 2.1.3 PRIMARY DATA
    - 2.1.3.1 Intended participants and key opinion leaders
    - 2.1.3.2 Key data from primary sources
    - 2.1.3.3 Key industry insights
    - 2.1.3.4 Breakdown of primaries
- 2.2 FACTOR ANALYSIS
- 2.3 MARKET SIZE ESTIMATION
  - 2.3.1 BOTTOM-UP APPROACH
    - 2.3.1.1 Approach to estimate market size using bottom-up analysis (demand side)
  - 2.3.2 TOP-DOWN APPROACH
    - 2.3.2.1 Approach to estimate market size using top-down analysis (supply side)
- 2.4 DATA TRIANGULATION
- 2.5 RESEARCH ASSUMPTIONS
- 2.6 RESEARCH LIMITATIONS
- 2.7 RISK ANALYSIS

### **3 EXECUTIVE SUMMARY**

### **4 PREMIUM INSIGHTS**

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN DIFFRACTIVE OPTICAL ELEMENT MARKET

4.2 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE

4.3 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION

4.4 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION & END-USE SECTOR

4.5 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION

### **5 MARKET OVERVIEW**

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

5.2.1 DRIVERS

5.2.1.1 Advancements in laser technology

5.2.1.2 Increasing demand for medical devices

5.2.1.3 Rising use of optical elements in telecommunications and data centers

5.2.2 RESTRAINTS

5.2.2.1 Competition from alternative technologies

5.2.3 OPPORTUNITIES

5.2.3.1 Emerging applications in augmented reality (AR) and virtual reality (VR)

5.2.3.2 Rising demand for automotive head-up displays

5.2.4 CHALLENGES

5.2.4.1 Uncertainties in DOE fabrication

5.2.4.2 High manufacturing costs

5.3 VALUE CHAIN ANALYSIS

5.4 ECOSYSTEM ANALYSIS

5.5 TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS

5.6 PRICING ANALYSIS

5.6.1 AVERAGE SELLING PRICE TREND OF DIFFRACTIVE OPTICAL ELEMENT HARDWARE OFFERED BY KEY PLAYERS

5.6.2 AVERAGE SELLING PRICE TREND OF DIFFRACTIVE OPTICAL ELEMENT, BY COMPONENT

5.6.3 AVERAGE SELLING PRICE TREND OF DIFFRACTIVE OPTICAL ELEMENT HARDWARE, BY REGION

5.7 TECHNOLOGY ANALYSIS

- 5.7.1 KEY TECHNOLOGIES
  - 5.7.1.1 Holography
- 5.7.2 COMPLEMENTARY TECHNOLOGIES
  - 5.7.2.1 Photolithography
  - 5.7.2.2 Integrated photonics
- 5.7.3 ADJACENT TECHNOLOGIES
  - 5.7.3.1 Fresnel zone plates
- 5.8 PORTER'S FIVE FORCES ANALYSIS
  - 5.8.1 INTENSITY OF COMPETITIVE RIVALRY
  - 5.8.2 BARGAINING POWER OF SUPPLIERS
  - 5.8.3 BARGAINING POWER OF BUYERS
  - 5.8.4 THREAT OF SUBSTITUTES
  - 5.8.5 THREAT OF NEW ENTRANTS
- 5.9 KEY STAKEHOLDERS AND BUYING CRITERIA
  - 5.9.1 KEY STAKEHOLDERS IN BUYING PROCESS
  - 5.9.2 BUYING CRITERIA
- 5.10 CASE STUDY ANALYSIS
  - 5.10.1 ENHANCED PRECISION IN AESTHETIC LASER TREATMENTS
  - 5.10.2 REVOLUTIONARY LARGE-AREA SURFACE TEXTURING WITH DLITE DIFFRACTIVE BEAM SPLITTERS
  - 5.10.3 OPTIMIZED FOCUSING OPTICS FOR ULTRA-SHORT PULSED LASERS
- 5.11 INVESTMENT AND FUNDING SCENARIO
- 5.12 TRADE ANALYSIS
  - 5.12.1 IMPORT DATA (HS CODE 9002)
  - 5.12.2 EXPORT DATA (HS CODE 9002)
- 5.13 PATENT ANALYSIS
- 5.14 KEY CONFERENCES AND EVENTS, 2024–2025
- 5.15 TARIFF AND REGULATORY LANDSCAPE
  - 5.15.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS
- 5.16 TARIFF ANALYSIS
- 5.17 STANDARDS
- 5.18 IMPACT OF AI ON DIFFRACTIVE OPTICAL ELEMENT MARKET
  - 5.18.1 INTRODUCTION
  - 5.18.2 AI-SPECIFIC USE CASES

## **6 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE**

### **6.1 INTRODUCTION**

## 6.2 DIFFRACTIVE BEAM SPLITTERS

6.2.1 RISING DEMAND FOR HIGH-PRECISION LASER TECHNOLOGY TO DRIVE MARKET GROWTH

## 6.3 DIFFRACTIVE PATTERN GENERATORS

6.3.1 EXPANSION OF MEDICAL LASER APPLICATIONS TO BOOST SEGMENT GROWTH

## 6.4 DIFFRACTIVE BEAM SHAPERS/DIFFRACTIVE DIFFUSERS

### 6.4.1 FLAT TOP

6.4.1.1 Growing demand for uniform beam distribution in semiconductor processing to boost growth

### 6.4.2 LINE TOP

6.4.2.1 Advancements in laser systems for manufacturing and inspection to fuel market growth

### 6.4.3 SPOT ARRAY

6.4.3.1 Growing need for rapid material processing in various industries to boost segment growth

### 6.4.4 OTHERS

## 7 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT

### 7.1 INTRODUCTION

### 7.2 BINARY/MULTILEVEL DOE

7.2.1 RISING DEMAND FOR ADVANCED OPTICAL COMPONENTS ACROSS INDUSTRIES TO BOOST MARKET GROWTH

### 7.3 DIFFRACTIVE LENSES

7.3.1 ADVANCEMENTS IN PHOTONICS AND OPTOELECTRONICS TECHNOLOGIES TO FUEL MARKET GROWTH

### 7.4 DIFFUSING MATERIALS

7.4.1 INCREASED DEMAND FOR PRECISION OPTICAL COMPONENTS TO BOOST SEGMENT GROWTH

### 7.5 GRATINGS

7.5.1 ADVANCEMENTS IN FABRICATION TECHNIQUES – KEY DRIVER

## 8 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION

### 8.1 INTRODUCTION

### 8.2 AR/VR

8.2.1 GROWING INTEREST IN AR/VR TO BOOST MARKET GROWTH

### 8.3 RAPID OPTICAL PROTOTYPING



### 8.3.1 RISING ADOPTION OF ADVANCED OPTICAL TECHNOLOGIES TO BOOST SEGMENT

### 8.4 ABERRATION CORRECTION

#### 8.4.1 RISING DEMAND FOR HIGH-PERFORMANCE OPTICAL SYSTEMS TO DRIVE SEGMENT

### 8.5 LIGHTWEIGHT OPTICS

#### 8.5.1 ADVANCEMENTS IN MANUFACTURING AND MINIATURIZATION TO FUEL MARKET GROWTH

### 8.6 ILLUMINATION SYSTEMS

#### 8.6.1 RAPID ADOPTION IN AUTOMOTIVE INDUSTRY TO DRIVE SEGMENT

### 8.7 SPECTROSCOPY

#### 8.7.1 INCREASING APPLICATIONS OF SPECTROSCOPY ACROSS INDUSTRIES TO DRIVE SEGMENT

### 8.8 IMAGING & SENSING

#### 8.8.1 RISING DEMAND FOR SENSORS IN EMERGING TECHNOLOGIES TO FUEL GROWTH

### 8.9 LASER MATERIAL PROCESSING

#### 8.9.1 ADVANCEMENTS IN LASER TECHNOLOGY AND MANUFACTURING PROCESSES TO PROPEL SEGMENT

### 8.10 LiDAR

#### 8.10.1 INCREASING APPLICATIONS OF LiDAR TO BOOST MARKET GROWTH

### 8.11 BIOMEDICAL DEVICES

#### 8.11.1 HIGH DEMAND FOR ADVANCED DIAGNOSTIC TOOLS TO FUEL SEGMENT

### 8.12 HOLOGRAPHY

#### 8.12.1 ADOPTION OF HOLOGRAM OPTICAL ELEMENTS IN VARIOUS SECTORS TO GROW SEGMENT

### 8.13 METROLOGY & INDUSTRIAL INSPECTION

#### 8.13.1 RAPID GROWTH OF INSPECTION SYSTEMS IN INDUSTRIES TO FUEL SEGMENT

### 8.14 OTHER APPLICATIONS

## **9 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR**

### 9.1 INTRODUCTION

### 9.2 CONSUMER ELECTRONICS

#### 9.2.1 RISING ADOPTION OF AUGMENTED AND VIRTUAL REALITY TO DRIVE MARKET GROWTH

### 9.3 AUTOMOTIVE

#### 9.3.1 INTEGRATION OF LiDAR SYSTEMS IN ADAS TO FUEL MARKET GROWTH

## 9.4 AEROSPACE & DEFENSE

9.4.1 USE IN ANTI-DRONE AND ROCKET DEFENSE SYSTEMS TO DRIVE SEGMENT GROWTH

## 9.5 HEALTHCARE

9.5.1 INVESTMENTS IN CELLULAR IMAGING TECHNOLOGIES TO DRIVE MARKET GROWTH

## 9.6 SEMICONDUCTOR

9.6.1 ADVANCEMENTS IN DEEP ULTRAVIOLET INSPECTION SYSTEMS TO FUEL MARKET GROWTH

## 9.7 IT & TELECOMMUNICATION

9.7.1 HIGH-SPEED DATA TRANSMISSION AND ADVANCEMENTS IN DOE TECHNOLOGY TO FUEL MARKET GROWTH

## 9.8 INDUSTRIAL

9.8.1 INCREASING ADOPTION OF INDUSTRY 4.0 AND ADDITIVE MANUFACTURING TO DRIVE MARKET GROWTH

## 9.9 OTHERS

9.9.1 ADVANCEMENTS IN SPECTROSCOPY TO FUEL MARKET GROWTH

## **10 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION**

### 10.1 INTRODUCTION

### 10.2 NORTH AMERICA

10.2.1 MACROECONOMIC OUTLOOK FOR NORTH AMERICA

#### 10.2.2 US

10.2.2.1 Advancements in laser technology to drive market growth

#### 10.2.3 CANADA

10.2.3.1 Investments in renewable energy and photonics industries to fuel market growth

#### 10.2.4 MEXICO

10.2.4.1 Increased funding in semiconductor and advanced infrastructure to boost market growth

### 10.3 EUROPE

10.3.1 MACROECONOMIC OUTLOOK FOR EUROPE

#### 10.3.2 GERMANY

10.3.2.1 LiDAR advancements and industry leadership to contribute toward market growth

#### 10.3.3 UK

10.3.3.1 Holographic technology advances and AR growth to fuel market growth

#### 10.3.4 FRANCE

- 10.3.4.1 Advancements in quantum computing and photonics to drive market growth
- 10.3.5 REST OF EUROPE
  - 10.3.5.1 Advancements in nanotechnology and flat optics to fuel market growth
- 10.4 ASIA PACIFIC
  - 10.4.1 MACROECONOMIC OUTLOOK FOR ASIA PACIFIC
  - 10.4.2 CHINA
    - 10.4.2.1 Technological advancement and strong government support to drive market growth
  - 10.4.3 JAPAN
    - 10.4.3.1 Rising demand for laser fusion technology and precision optical solutions to accelerate market growth
  - 10.4.4 SOUTH KOREA
    - 10.4.4.1 Advancements in semiconductor manufacturing and government support to enhance market growth
  - 10.4.5 REST OF ASIA PACIFIC
    - 10.4.5.1 Investments in AR, VR, and environmental monitoring technologies to drive market growth
- 10.5 ROW
  - 10.5.1 MACROECONOMIC OUTLOOK FOR ROW
  - 10.5.2 MIDDLE EAST & AFRICA
    - 10.5.2.1 GCC Countries
      - 10.5.2.1.1 Investments in medical devices and technology to fuel market growth
    - 10.5.2.2 Rest of Middle East
      - 10.5.2.2.1 Investment in SMEs to fuel market growth
  - 10.5.3 SOUTH AMERICA
    - 10.5.3.1 Investments in telecommunications and digital infrastructure to fuel market growth

## **11 COMPETITIVE LANDSCAPE**

- 11.1 OVERVIEW
- 11.2 KEY PLAYER STRATEGIES/RIGHT TO WIN, 2021–2024
  - 11.2.1 PRODUCT PORTFOLIO
  - 11.2.2 REGIONAL FOCUS
  - 11.2.3 SOLUTION OFFERINGS
  - 11.2.4 ORGANIC/INORGANIC STRATEGIES
- 11.3 REVENUE ANALYSIS, 2019–2023
- 11.4 MARKET SHARE ANALYSIS, 2023
- 11.5 COMPANY VALUATION AND FINANCIAL METRICS

## 11.6 BRAND/PRODUCT COMPARISON

### 11.7 COMPANY EVALUATION MATRIX: KEY PLAYERS

#### 11.7.1 STARS

#### 11.7.2 EMERGING LEADERS

#### 11.7.3 PERVASIVE PLAYERS

#### 11.7.4 PARTICIPANTS

#### 11.7.5 COMPANY FOOTPRINT: KEY PLAYERS, 2023

##### 11.7.5.1 Company footprint

##### 11.7.5.2 Type Footprint

##### 11.7.5.3 Component Footprint

##### 11.7.5.4 End-use Sector Footprint

##### 11.7.5.5 Region Footprint

### 11.8 COMPANY EVALUATION MATRIX: STARTUPS/SMES, 2023

#### 11.8.1 PROGRESSIVE COMPANIES

#### 11.8.2 RESPONSIVE COMPANIES

#### 11.8.3 DYNAMIC COMPANIES

#### 11.8.4 STARTING BLOCKS

#### 11.8.5 COMPETITIVE BENCHMARKING: STARTUPS/SMES, 2023

##### 11.8.5.1 Detailed list of key startups/SMEs

##### 11.8.5.2 Competitive benchmarking of key startups/SMEs

### 11.9 COMPETITIVE SCENARIO

#### 11.9.1 PRODUCT LAUNCHES

## 12 COMPANY PROFILES

### 12.1 KEY PLAYERS

#### 12.1.1 ZEISS GROUP

##### 12.1.1.1 Business overview

##### 12.1.1.2 Products/Solutions/Services offered

##### 12.1.1.3 Recent developments

###### 12.1.1.3.1 Expansions

##### 12.1.1.4 MnM view

###### 12.1.1.4.1 Right to win

###### 12.1.1.4.2 Strategic choices

###### 12.1.1.4.3 Weaknesses and competitive threats

#### 12.1.2 AGC INC.

##### 12.1.2.1 Business overview

##### 12.1.2.2 Products/Solutions/Services offered

##### 12.1.2.3 MnM view

- 12.1.2.3.1 Right to win
- 12.1.2.3.2 Strategic choices
- 12.1.2.3.3 Weaknesses and competitive threats
- 12.1.3 COHERENT CORP.
  - 12.1.3.1 Business overview
  - 12.1.3.2 Products/Solutions/Services offered
  - 12.1.3.3 Recent developments
    - 12.1.3.3.1 Product launches
  - 12.1.3.4 MnM view
    - 12.1.3.4.1 Right to win
    - 12.1.3.4.2 Strategic choices
    - 12.1.3.4.3 Weaknesses and competitive threats
- 12.1.4 JENOPTIK
  - 12.1.4.1 Business overview
  - 12.1.4.2 Products/Solutions/Services offered
  - 12.1.4.3 Recent developments
    - 12.1.4.3.1 Expansions
  - 12.1.4.4 MnM view
    - 12.1.4.4.1 Right to win
    - 12.1.4.4.2 Strategic choices
    - 12.1.4.4.3 Weaknesses and competitive threats
- 12.1.5 HOLO/OR LTD.
  - 12.1.5.1 Business overview
  - 12.1.5.2 Products/Solutions/Services offered
  - 12.1.5.3 MnM view
    - 12.1.5.3.1 Right to win
    - 12.1.5.3.2 Strategic choices
    - 12.1.5.3.3 Weaknesses and competitive threats
- 12.1.6 BROADCOM
  - 12.1.6.1 Business overview
  - 12.1.6.2 Products/Solutions/Services offered
- 12.1.7 NALUX CO., LTD.
  - 12.1.7.1 Business overview
  - 12.1.7.2 Products/Solutions/Services offered
- 12.1.8 HOLOEYE PHOTONICS AG
  - 12.1.8.1 Business overview
  - 12.1.8.2 Products/Solutions/Services offered
  - 12.1.8.3 Recent developments
    - 12.1.8.3.1 Product launches

**12.1.9 NISSEI TECHNOLOGY CORPORATION**

12.1.9.1 Business overview

12.1.9.2 Products/Solutions/Services offered

**12.1.10 SINTEC OPTRONICS PTE LTD**

12.1.10.1 Business overview

12.1.10.2 Products/Solutions/Services offered

**12.2 OTHER PLAYERS**

12.2.1 NIL TECHNOLOGY

12.2.2 LASER COMPONENTS

12.2.3 APOLLO OPTICAL SYSTEMS INC.

12.2.4 HYPERION OPTICS

12.2.5 VIAVI SOLUTIONS INC.

12.2.6 LASER OPTICAL ENGINEERING LTD

12.2.7 DIOPTIC GMBH

12.2.8 FOCUSLIGHT TECHNOLOGIES INC.

12.2.9 OPTIGRATE CORP

12.2.10 WUXI OPTONTECH LTD

12.2.11 HOLOGRAPHIX LLC

12.2.12 FRANKFURT LASER COMPANY

12.2.13 AXETRIS AG

12.2.14 WAVELENGTH OPTO-ELECTRONIC SINGAPORE

12.2.15 EGISMOS CORP

**13 APPENDIX**

13.1 INSIGHTS FROM INDUSTRY EXPERTS

13.2 DISCUSSION GUIDE

13.3 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL

13.4 CUSTOMIZATION OPTIONS

13.5 RELATED REPORTS

13.6 AUTHOR DETAILS

TABLE 1 ROLE OF COMPANIES IN DIFFRACTIVE OPTICAL ELEMENT  
ECOSYSTEMTABLE 2 AVERAGE SELLING PRICE TREND OF DIFFRACTIVE OPTICAL ELEMENT  
COMPONENTS OFFERED BY KEY PLAYERS (USD)TABLE 3 DIFFRACTIVE OPTICAL ELEMENT MARKET: PORTER'S FIVE FORCES  
ANALYSISTABLE 4 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP  
THREE END-USE SECTORS

TABLE 5 KEY BUYING CRITERIA FOR TOP THREE END-USE SECTORS

TABLE 6 DIFFRACTIVE OPTICAL ELEMENT MARKET: PATENTS, 2020–2024

TABLE 7 DIFFRACTIVE OPTICAL ELEMENT MARKET: KEY CONFERENCES AND EVENTS, 2024–2025

TABLE 8 NORTH AMERICA: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 9 EUROPE: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 10 ASIA PACIFIC: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 11 ROW: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 12 MFN TARIFF FOR HS CODE 9002-COMPLIANT PRODUCTS EXPORTED BY CHINA

TABLE 13 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 14 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE, 2024–2030 (USD MILLION)

TABLE 15 DIFFRACTIVE BEAM SHAPERS/DIFFUSERS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 16 DIFFRACTIVE BEAM SHAPERS/DIFFUSERS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY TYPE, 2024–2030 (USD MILLION)

TABLE 17 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 18 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 19 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (THOUSAND UNITS)**

TABLE 20 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (THOUSAND UNITS)**

TABLE 21 BINARY/MULTILEVEL DOE: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY APPLICATION, 2020–2023 (USD MILLION)

TABLE 22 BINARY/MULTILEVEL DOE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION, 2024–2030 (USD MILLION)

TABLE 23 BINARY/MULTILEVEL DOE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2020–2023 (USD MILLION)

TABLE 24 BINARY/MULTILEVEL DOE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2024–2030 (USD MILLION)

TABLE 25 DIFFRACTIVE LENSES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION, 2020–2023 (USD MILLION)

TABLE 26 DIFFRACTIVE LENSES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION, 2024–2030 (USD MILLION)

TABLE 27 DIFFRACTIVE LENSES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2020–2023 (USD MILLION)

TABLE 28 DIFFRACTIVE LENSES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2024–2030 (USD MILLION)

TABLE 29 DIFFUSING MATERIALS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION, 2020–2023 (USD MILLION)

TABLE 30 DIFFUSING MATERIALS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION, 2024–2030 (USD MILLION)

TABLE 31 DIFFUSING MATERIALS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2020–2023 (USD MILLION)

TABLE 32 DIFFUSING MATERIALS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2024–2030 (USD MILLION)

TABLE 33 GRATINGS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION,

### **2020–2023(USD MILLION)**

TABLE 34 GRATINGS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION,

### **2024–2030 (USD MILLION)**

TABLE 35 GRATINGS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2020–2023 (USD MILLION)

TABLE 36 GRATINGS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2024–2030 (USD MILLION)

TABLE 37 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION,



**2020–2023 (USD MILLION)**

TABLE 38 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY APPLICATION,

**2024–2030 (USD MILLION)**

TABLE 39 AR/VR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 40 AR/VR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 41 RAPID OPTICAL PROTOTYPING: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 42 RAPID OPTICAL PROTOTYPING: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 43 ABERRATION CORRECTION: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 44 ABERRATION CORRECTION: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 45 LIGHTWEIGHT OPTICS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 46 LIGHTWEIGHT OPTICS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 47 ILLUMINATION SYSTEMS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 48 ILLUMINATION SYSTEMS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 49 SPECTROSCOPY: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 50 SPECTROSCOPY: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 51 IMAGING &amp; SENSING: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY

COMPONENT, 2020–2023 (USD MILLION)

TABLE 52 IMAGING & SENSING: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 53 LASER MATERIAL PROCESSING: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 54 LASER MATERIAL PROCESSING: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 55 LIDAR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 56 LIDAR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 57 BIOMEDICAL DEVICES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 58 BIOMEDICAL DEVICES: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 59 HOLOGRAPHY: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 60 HOLOGRAPHY: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 61 METROLOGY & INDUSTRIAL INSPECTION: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 62 METROLOGY & INDUSTRIAL INSPECTION: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 63 OTHER APPLICATIONS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 64 OTHER APPLICATIONS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 65 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR,  
**2020–2023 (USD MILLION)**

TABLE 66 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR,  
**2024–2030 (USD MILLION)**

TABLE 67 CONSUMER ELECTRONICS: DIFFRACTIVE OPTICAL ELEMENT  
MARKET,  
BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 68 CONSUMER ELECTRONICS: DIFFRACTIVE OPTICAL ELEMENT  
MARKET,  
BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 69 CONSUMER ELECTRONICS: DIFFRACTIVE OPTICAL ELEMENT  
MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 70 CONSUMER ELECTRONICS: DIFFRACTIVE OPTICAL ELEMENT  
MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 71 CONSUMER ELECTRONICS: NORTH AMERICA DIFFRACTIVE OPTICAL  
ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 72 CONSUMER ELECTRONICS: NORTH AMERICA DIFFRACTIVE OPTICAL  
ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 73 CONSUMER ELECTRONICS: EUROPE DIFFRACTIVE OPTICAL  
ELEMENT MARKET,  
BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 74 CONSUMER ELECTRONICS: EUROPE DIFFRACTIVE OPTICAL  
ELEMENT MARKET,  
BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 75 CONSUMER ELECTRONICS: ASIA PACIFIC DIFFRACTIVE OPTICAL  
ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 76 CONSUMER ELECTRONICS: ASIA PACIFIC DIFFRACTIVE OPTICAL  
ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 77 CONSUMER ELECTRONICS: ROW DIFFRACTIVE OPTICAL ELEMENT  
MARKET,  
BY REGION, 2020–2023 (USD MILLION)

TABLE 78 CONSUMER ELECTRONICS: ROW DIFFRACTIVE OPTICAL ELEMENT  
MARKET,  
BY REGION, 2024–2030 (USD MILLION)

TABLE 79 AUTOMOTIVE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY

COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 80 AUTOMOTIVE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 81 AUTOMOTIVE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 82 AUTOMOTIVE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 83 AUTOMOTIVE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 84 AUTOMOTIVE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 85 AUTOMOTIVE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 86 AUTOMOTIVE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 87 AUTOMOTIVE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 88 AUTOMOTIVE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 89 AUTOMOTIVE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 90 AUTOMOTIVE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY

REGION,

**2024–2030 (USD MILLION)**

TABLE 91 AEROSPACE & DEFENSE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 92 AEROSPACE & DEFENSE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 93 AEROSPACE & DEFENSE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 94 AEROSPACE & DEFENSE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 95 AEROSPACE & DEFENSE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 96 AEROSPACE & DEFENSE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 97 AEROSPACE & DEFENSE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 98 AEROSPACE & DEFENSE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 99 AEROSPACE & DEFENSE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 100 AEROSPACE & DEFENSE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 101 AEROSPACE & DEFENSE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY REGION, 2020–2023 (USD MILLION)

TABLE 102 AEROSPACE & DEFENSE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY REGION, 2024–2030 (USD MILLION)

TABLE 103 HEALTHCARE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 104 HEALTHCARE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 105 HEALTHCARE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 106 HEALTHCARE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 107 HEALTHCARE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 108 HEALTHCARE: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 109 HEALTHCARE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 110 HEALTHCARE: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 111 HEALTHCARE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 112 HEALTHCARE: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 113 HEALTHCARE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 114 HEALTHCARE: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 115 SEMICONDUCTOR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 116 SEMICONDUCTOR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 117 SEMICONDUCTOR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 118 SEMICONDUCTOR: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 119 SEMICONDUCTOR: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 120 SEMICONDUCTOR: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 121 SEMICONDUCTOR: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 122 SEMICONDUCTOR: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 123 SEMICONDUCTOR: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 124 SEMICONDUCTOR: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 125 SEMICONDUCTOR: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 126 SEMICONDUCTOR: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 127 IT & TELECOMMUNICATION: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 128 IT & TELECOMMUNICATION: DIFFRACTIVE OPTICAL ELEMENT MARKET,  
BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 129 IT & TELECOMMUNICATION: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 130 IT & TELECOMMUNICATION: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 131 IT & TELECOMMUNICATION: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 132 IT & TELECOMMUNICATION: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 133 IT & TELECOMMUNICATION: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,  
BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 134 IT & TELECOMMUNICATION: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,  
BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 135 IT & TELECOMMUNICATION: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 136 IT & TELECOMMUNICATION: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 137 IT & TELECOMMUNICATION: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,  
BY REGION, 2020–2023 (USD MILLION)

TABLE 138 IT & TELECOMMUNICATION: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,  
BY REGION, 2024–2030 (USD MILLION)

TABLE 139 INDUSTRIAL: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2020–2023 (USD MILLION)**

TABLE 140 INDUSTRIAL: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COMPONENT,

**2024–2030 (USD MILLION)**

TABLE 141 INDUSTRIAL: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,



**2020–2023 (USD MILLION)**

TABLE 142 INDUSTRIAL: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 143 INDUSTRIAL: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 144 INDUSTRIAL: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 145 INDUSTRIAL: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 146 INDUSTRIAL: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 147 INDUSTRIAL: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 148 INDUSTRIAL: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 149 INDUSTRIAL: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2020–2023 (USD MILLION)**

TABLE 150 INDUSTRIAL: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,

**2024–2030 (USD MILLION)**

TABLE 151 OTHER END-USE SECTORS: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2020–2023 (USD MILLION)

TABLE 152 OTHER END-USE SECTORS: DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COMPONENT, 2024–2030 (USD MILLION)

TABLE 153 OTHER END-USE SECTORS: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 154 OTHER END-USE SECTORS: DIFFRACTIVE OPTICAL ELEMENT

MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 155 OTHER END-USE SECTORS: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 156 OTHER END-USE SECTORS: NORTH AMERICA DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 157 OTHER END-USE SECTORS: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 158 OTHER END-USE SECTORS: EUROPE DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 159 OTHER END-USE SECTORS: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2020–2023 (USD MILLION)

TABLE 160 OTHER END-USE SECTORS: ASIA PACIFIC DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY, 2024–2030 (USD MILLION)

TABLE 161 OTHER END-USE SECTORS: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY REGION, 2020–2023 (USD MILLION)

TABLE 162 OTHER END-USE SECTORS: ROW DIFFRACTIVE OPTICAL ELEMENT MARKET,

BY REGION, 2024–2030 (USD MILLION)

TABLE 163 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2020–2023 (USD MILLION)

TABLE 164 DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION, 2024–2030 (USD MILLION)

TABLE 165 NORTH AMERICA: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,

### **2020–2023 (USD MILLION)**

TABLE 166 NORTH AMERICA: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,

### **2024–2030 (USD MILLION)**

TABLE 167 NORTH AMERICA: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2020–2023 (USD MILLION)

TABLE 168 NORTH AMERICA: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR, 2024–2030 (USD MILLION)

TABLE 169 EUROPE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,  
**2020–2023 (USD MILLION)**

TABLE 170 EUROPE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,  
**2024–2030 (USD MILLION)**

TABLE 171 EUROPE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE  
SECTOR,  
**2020–2023 (USD MILLION)**

TABLE 172 EUROPE: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE  
SECTOR,  
**2024–2030 (USD MILLION)**

TABLE 173 ASIA PACIFIC: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY  
COUNTRY,  
**2020–2023 (USD MILLION)**

TABLE 174 ASIA PACIFIC: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY  
COUNTRY,  
**2024–2030 (USD MILLION)**

TABLE 175 ASIA PACIFIC: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-  
USE SECTOR, 2020–2023 (USD MILLION)

TABLE 176 ASIA PACIFIC: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-  
USE SECTOR, 2024–2030 (USD MILLION)

TABLE 177 ROW: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,  
**2020–2023 (USD MILLION)**

TABLE 178 ROW: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY REGION,  
**2024–2030 (USD MILLION)**

TABLE 179 ROW: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR,

**2020–2023 (USD MILLION)**

TABLE 180 ROW: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY END-USE SECTOR,

**2024–2030 (USD MILLION)**

TABLE 181 MIDDLE EAST: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,

**2020–2023 (USD MILLION)**

TABLE 182 MIDDLE EAST: DIFFRACTIVE OPTICAL ELEMENT MARKET, BY COUNTRY,

**2024–2030 (USD MILLION)**

TABLE 183 KEY PLAYER STRATEGIES/RIGHT TO WIN, 2021–2024

TABLE 184 DIFFRACTIVE OPTICAL ELEMENT MARKET: DEGREE OF COMPETITION, 2023

TABLE 185 DIFFRACTIVE OPTICAL ELEMENT MARKET: TYPE FOOTPRINT

TABLE 186 DIFFRACTIVE OPTICAL ELEMENT MARKET: COMPONENT FOOTPRINT

TABLE 187 DIFFRACTIVE OPTICAL ELEMENT MARKET: END-USE SECTOR FOOTPRINT

TABLE 188 DIFFRACTIVE OPTICAL ELEMENT MARKET: REGION FOOTPRINT

TABLE 189 DIFFRACTIVE OPTICAL ELEMENT MARKET: KEY STARTUPS/SMES

TABLE 190 DIFFRACTIVE OPTICAL ELEMENT MARKET: COMPETITIVE BENCHMARKING OF KEY STARTUPS/SMES

TABLE 191 DIFFRACTIVE OPTICAL ELEMENT MARKET: PRODUCT LAUNCHES, 2021?2024

TABLE 192 DIFFRACTIVE OPTICAL ELEMENT MARKET: EXPANSIONS, 2021–2024

TABLE 193 ZEISS GROUP: COMPANY OVERVIEW

TABLE 194 ZEISS GROUP: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 195 ZEISS GROUP: EXPANSIONS

TABLE 196 AGC INC.: COMPANY OVERVIEW  
TABLE 197 AGC INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 198 COHERENT CORP.: COMPANY OVERVIEW  
TABLE 199 COHERENT CORP.: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 200 COHERENT CORP.: PRODUCT LAUNCHES  
TABLE 201 JENOPTIK: COMPANY OVERVIEW  
TABLE 202 JENOPTIK: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 203 JENOPTIK: EXPANSIONS  
TABLE 204 HOLO/OR LTD.: COMPANY OVERVIEW  
TABLE 205 HOLO/OR LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 206 BROADCOM: COMPANY OVERVIEW  
TABLE 207 BROADCOM: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 208 NALUX CO., LTD.: COMPANY OVERVIEW  
TABLE 209 NALUX CO., LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 210 HOLOEYE PHOTONICS AG: COMPANY OVERVIEW  
TABLE 211 HOLOEYE PHOTONICS AG: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 212 HOLOEYE PHOTONICS AG: PRODUCT LAUNCHES  
TABLE 213 NISSEI TECHNOLOGY CORPORATION: COMPANY OVERVIEW  
TABLE 214 NISSEI TECHNOLOGY CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 215 SINTEC OPTRONICS PTE LTD.: COMPANY OVERVIEW  
TABLE 216 SINTEC OPTRONICS PTE LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

## I would like to order

Product name: Diffractive Optical Element Market by Beam Splitter, Pattern Generator, Diffuser, Lenses, Multilevel DOE, AR/VR, LIDAR, Laser Material Processing, Biomedical Devices, Holography, Spectroscopy, Metrology & Industrial Inspection - Global Forecast to 2030

Product link: <https://marketpublishers.com/r/DF69768F679AEN.html>

Price: US\$ 4,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/DF69768F679AEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970