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# Global Optical Grade Quartz Wafers Supply, Demand and Key Producers, 2026-2032

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## Abstracts

The global Optical Grade Quartz Wafers market size is expected to reach $ 947 million by 2032, rising at a market growth of 6.8% CAGR during the forecast period (2026-2032).

Optical grade quartz wafers are high-purity, precision-polished fused silica substrates manufactured from premium quartz material with exceptional optical clarity and thermal stability. These wafers exhibit high transmission across ultraviolet, visible, and infrared wavelengths, making them ideal for applications where optical performance is paramount, including laser optics, spectroscopy, lenses, prisms, windows, and sensors. Unlike standard semiconductor wafers, optical grade quartz wafers prioritize optical homogeneity, minimal birefringence, and ultra-low coefficient of thermal expansion to ensure stable optical path length under varying temperatures. Common types include single-side polished (SSP) and double-side polished (DSP) configurations. From a value chain perspective, upstream includes high-purity quartz sand suppliers (4N5?4N8 grades), boule growing and slicing equipment manufacturers; midstream involves wafer shaping, precision lapping and polishing, cleaning, inspection, and packaging; downstream demand spans laser optics manufacturing, spectroscopy instrumentation, semiconductor photomask substrates, fiber optic components, aerospace and defense optical systems, and medical imaging devices. In 2025, the average selling price is approximately US$88.00 per unit , global sales volume is about 6,591k units, and gross margins generally range from 30% to 45%, driven by raw material purity requirements, polishing precision complexity, surface quality specifications, and stringent optical certification standards.

The optical grade quartz wafers market is experiencing a stable demand environment driven by the expanding applications of precision optics in emerging technologies such

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as augmented reality, virtual reality, autonomous vehicles, and advanced imaging systems. Unlike the high-purity quartz market for semiconductor crucibles, which grows at a modest CAGR, the optical-grade segment remains relatively flat due to mature substitution threats from synthetic fused silica alternatives and competing materials like sapphire and optical glass. The global optical-grade quartz wafer market is valued at approximately $580 million, with production concentrated in North America, Japan, and China.

Another key trend is the increasing demand for larger wafer diameters and tighter surface specifications. As laser systems and spectroscopic instruments become more sophisticated, the requirement for 100mm to 200mm diameter wafers with surface roughness below 0.5nm Ra and transmitted wavefront distortion under ?/10 has intensified. Double-side polished (DSP) wafers have gained market share over single-side polished (SSP) variants, particularly in applications requiring high parallelism and minimal wedge error. The 100mm diameter wafer segment currently dominates the market, accounting for approximately 36% of global consumption, driven by its extensive use in laser optics and spectroscopy applications.

This report studies the global Optical Grade Quartz Wafers production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Optical Grade Quartz Wafers and provides market size (US$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Optical Grade Quartz Wafers that contribute to its increasing demand across many markets.

Highlights and key features of the study
Global Optical Grade Quartz Wafers total production and demand, 2021-2032, (K Units)
Global Optical Grade Quartz Wafers total production value, 2021-2032, (USD Million)
Global Optical Grade Quartz Wafers production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (K Units), (based on production site)
Global Optical Grade Quartz Wafers consumption by region & country, CAGR, 2021-2032 & (K Units)
U.S. VS China: Optical Grade Quartz Wafers domestic production, consumption, key domestic manufacturers and share
Global Optical Grade Quartz Wafers production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (K Units)
Global Optical Grade Quartz Wafers production by Type, production, value, CAGR,

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2021-2032, (USD Million) & (K Units)
Global Optical Grade Quartz Wafers production by Application, production, value, CAGR, 2021-2032, (USD Million) & (K Units)

This report profiles key players in the global Optical Grade Quartz Wafers market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Corning Incorporated, AGC Inc., Plan Optik AG, Sydor Optics, Esco Optics, Inc., Pr?zisions Glas & Optik GmbH, Swift Glass Company, Feilihua Quartz, Hangzhou Freqcontrol Electronic Technology, Techinstro, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Optical Grade Quartz Wafers market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), volume (production, consumption) & (K Units) and average price (US$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Optical Grade Quartz Wafers Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

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India

Rest of World

Global Optical Grade Quartz Wafers Market, Segmentation by Type:

Single Side Polished

Double Sides Polished

Global Optical Grade Quartz Wafers Market, Segmentation by Thickness:

Thin Wafer (0.5-1.0 mm)

Standard Wafer (1.0-3.0 mm)

Thick Substrate (> 3.0 mm)

Global Optical Grade Quartz Wafers Market, Segmentation by Diameter / Size:

Small Diameter (25-50 mm)

Medium Diameter (50-100 mm)

Large Diameter (100-200 mm)

Global Optical Grade Quartz Wafers Market, Segmentation by Application:

Laser Optics

Spectroscopy

Others

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Companies Profiled:

Corning Incorporated

AGC Inc.

Plan Optik AG

Sydor Optics

Esco Optics, Inc.

Pr?zisions Glas & Optik GmbH

Swift Glass Company

Feilihua Quartz

Hangzhou Freqcontrol Electronic Technology

Techinstro

Nano Quarz Wafer

Precision Micro-Optics

Vritra Technologies

Shanghai BonTek Optoelectronics

MSE Supplies LLC

Key Questions Answered:
1. How big is the global Optical Grade Quartz Wafers market?
2. What is the demand of the global Optical Grade Quartz Wafers market?
3. What is the year over year growth of the global Optical Grade Quartz Wafers market?
4. What is the production and production value of the global Optical Grade Quartz Wafers market?

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5. Who are the key producers in the global Optical Grade Quartz Wafers market?
6. What are the growth factors driving the market demand?

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## 5 MARKET ANALYSIS BY TYPE



## 6 MARKET ANALYSIS BY THICKNESS

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## 7 MARKET ANALYSIS BY DIAMETER / SIZE



## 8 MARKET ANALYSIS BY APPLICATION



## 9 COMPANY PROFILES

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