

Near Infrared Absorbing Materials Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Material (Organic, Inorganic), By Function (High Transparency, Absorption, Heat Resistance), By End Use Industry (Electronics & Telecommunications, Industrial Sector, Defence & Security, Photovoltaics, Others), By Region and Competition, 2020-2030F

Market Report | 2025-08-25 | 183 pages | TechSci Research

AVAILABLE LICENSES:

- Single User License \$4500.00
- Multi-User License \$5500.00
- Custom Research License \$8000.00

Report description:

Market Overview

Global Near Infrared Absorbing Materials Market was valued at USD 296.13 Million in 2024 and is expected to reach USD 436.76 Million by 2030 with a CAGR of 6.89% during the forecast period. The global Near Infrared (NIR) Absorbing Materials market is witnessing significant growth, driven by the increasing demand for advanced optical and electronic components across various industries. These materials, which absorb near-infrared light, are vital in applications such as security printing, sensors, automotive glazing, packaging, solar control films, and medical diagnostics. Their ability to enhance product performance by offering improved energy efficiency, anti-counterfeiting capabilities, and precise sensing functionalities has positioned them as critical components in modern technology systems.

The market expansion is fueled by rapid advancements in industries such as automotive, electronics, and healthcare, particularly in regions like Asia-Pacific, North America, and Europe. In the automotive sector, NIR absorbing materials are used in smart glass and infrared shielding applications, aiding in cabin temperature regulation and improved passenger comfort. Meanwhile, the growing emphasis on sustainability and energy conservation has led to the increased use of NIR absorbers in architectural coatings and solar films to reduce heat buildup.

Technological innovation and ongoing R&D efforts are also contributing to the development of more efficient and application-specific NIR absorbing compounds, including inorganic nanoparticles and organic dyes. However, challenges such as high production costs and regulatory hurdles related to environmental impact may pose constraints to market growth.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Nevertheless, with rising investments and the proliferation of smart technologies, the global NIR absorbing materials market is expected to continue its upward trajectory in the coming years.

Key Market Drivers

Rising Demand of Near Infrared Absorbing Materials in Electronics & Telecommunications Industry

Electronics & Telecommunications is a dynamic and ever-evolving industry characterized by rapid technological advancements and the constant quest for enhanced performance and functionality. Within this sector, Near Infrared (NIR) absorbing materials have emerged as critical components, driving innovations in various applications. Near Infrared absorbing materials are substances that possess the unique ability to absorb and manipulate light within the Near Infrared spectrum, which ranges from approximately 750 nanometers (nm) to 2500 nm. This optical property makes them invaluable in a multitude of applications, particularly within the Electronics & Telecommunications sector. One of the foremost applications of NIR absorbing materials in electronics is their use in optical filters and sensors. These materials allow precise control over the transmission and absorption of NIR light, enabling the creation of optical devices with superior performance characteristics. NIR filters find extensive use in telecommunications equipment, enhancing signal quality and reducing interference.

In the United States, the CHIPS and Science Act received an additional USD 11 billion in funding in 2024, further strengthening domestic production of semiconductors and optoelectronic components. This investment is advancing the development of photonic technologies, including near-infrared (NIR) filters and sensors, which are integral to telecommunications and defense applications. The U.S. Department of Energy also incorporated NIR-related materials into its advanced materials R&D strategy, with a focus on sustainable and high-performance optical solutions.

In India, the government's Production-Linked Incentive (PLI) scheme for IT hardware and semiconductors continued to attract substantial foreign and local investment in 2024. This initiative is expanding domestic manufacturing capacity for smartphones, data centers, and telecom equipment, all of which increasingly integrate NIR-sensitive components for functions such as facial recognition, biometric authentication, and optical signal processing. Meanwhile, China sustained its investment momentum under the 14th Five-Year Plan and the "Made in China 2025" initiative, prioritizing the rollout of next-generation telecom infrastructure and fiber-optic networks. Across the European Union, the Horizon Europe 2021-2027 framework continued to allocate significant funding for photonics research, targeting areas like digital healthcare, intelligent transport, and secure communication. These projects frequently rely on high-performance optical coatings and NIR-absorbing materials to support sensor accuracy, data integrity, and imaging technologies. These government-driven programs and policy incentives are accelerating innovation in optoelectronics, with NIR absorbing materials serving as critical enablers. The expanding presence of smart cities, autonomous systems, next-gen telecom networks, and wearable technologies is further reinforcing electronics and telecommunications as primary growth sectors for the NIR materials market.

Key Market Challenges

Cost-Effective Manufacturing and Regulatory Compliance

One of the primary challenges in the NIR absorbing materials market is the cost-effective manufacturing of these materials. Producing high-quality NIR absorbing pigments, coatings, or nanoparticles often involves complex processes and specialized materials, which can drive up production costs. Finding ways to reduce manufacturing costs while maintaining product quality is crucial to making NIR absorbing materials more accessible to a wider range of industries and applications.

Moreover, as NIR absorbing materials find applications in critical sectors such as healthcare and food safety, they are subject to stringent regulatory requirements. Ensuring that NIR materials comply with regulatory standards, including safety and environmental regulations, can be a significant challenge. Companies in the NIR absorbing materials market must invest in research and development to meet these requirements and navigate the complex landscape of regulations. Furthermore, the Near Infrared Absorbing Materials market is highly competitive, with numerous players vying for market share. This competition can lead to price wars and margin pressures, affecting profitability. Companies must continually innovate to differentiate their products and maintain a competitive edge.

Key Market Trends

Rising Demand for Energy-Efficient Building Materials

One of the prominent trends in the NIR absorbing materials market is the increasing demand for energy-efficient building materials. NIR absorbing coatings and pigments are being incorporated into construction materials like paints and coatings. These

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

materials help regulate indoor temperatures by reflecting NIR radiation, reducing the need for air conditioning during hot weather. This trend aligns with the growing emphasis on sustainable construction practices and energy conservation, especially in regions with extreme climates. In countries like the United States, green building incentives and tax credits under federal and state energy-efficiency programs continue to encourage the use of low-emissivity and solar control glazing technologies, many of which incorporate NIR filtering capabilities. Similarly, in the European Union, the updated Energy Performance of Buildings Directive (EPBD) promotes the use of energy-saving technologies in both new construction and retrofitting, pushing the adoption of materials that support passive cooling and reduced carbon footprints. India and several Southeast Asian nations have integrated green building certifications into urban infrastructure guidelines. These policies often include thermal performance benchmarks for materials used in windows and external walls creating demand for innovative glazing systems with embedded NIR absorption properties. State-level incentives, including fast-track permitting and property tax rebates, have further accelerated market uptake.

Key Market Players

- Sumitomo Metal Mining Co., Ltd.
- Nanophase Technologies Corporation
- Heraeus Holding
- Keeling & Walker Ltd
- Edmund Scientific Corporation
- Nippon Shokubai Co., Ltd.
- Resonac Holdings Corporation
- Inframat Advanced Materials LLC
- Epolin LLC
- American Elements

Report Scope:

In this report, the Global Near Infrared Absorbing Materials Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□ Near Infrared Absorbing Materials Market, By Material:

- o Organic Materials
- o Inorganic Materials

-□ Near Infrared Absorbing Materials Market, By Function:

- o High Transparency
- o Absorption
- o Heat Resistance

-□ Near Infrared Absorbing Materials Market, By End Use Industry:

- o Electronics & Telecommunications
- o Industrial Sector
- o Defence & Security
- o Photovoltaics
- o Others

-□ Near Infrared Absorbing Materials Market, By Region:

- o Asia-Pacific
 - China
 - India
 - Australia
 - Japan
 - South Korea
- o Europe
 - France

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- Germany
- Spain
- Italy
- United Kingdom
- o North America
- United States
- Mexico
- Canada
- o South America
- Brazil
- Argentina
- Colombia
- o Middle East & Africa
- South Africa
- Saudi Arabia
- UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Near Infrared Absorbing Materials Market.

Available Customizations:

Global Near Infrared Absorbing Materials Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□Detailed analysis and profiling of additional market players (up to five).

Table of Contents:

1. Product Overview
 - 1.1. Market Definition
 - 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations
2. Research Methodology
 - 2.1. Objective of the Study
 - 2.2. Baseline Methodology
 - 2.3. Key Industry Partners
 - 2.4. Major Association and Secondary Sources

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations
- 3. Executive Summary
 - 3.1. Overview of the Market
 - 3.2. Overview of Key Market Segmentations
 - 3.3. Overview of Key Market Players
 - 3.4. Overview of Key Regions/Countries
 - 3.5. Overview of Market Drivers, Challenges, Trends
- 4. Impact of COVID-19 on Global Near Infrared Absorbing Materials Market
- 5. Voice of Customer
- 6. Global Near Infrared Absorbing Materials Market Outlook
 - 6.1. Market Size & Forecast
 - 6.1.1. By Value
 - 6.2. Market Share & Forecast
 - 6.2.1. By Material (Organic, Inorganic)
 - 6.2.2. By Function (High Transparency, Absorption, Heat Resistance)
 - 6.2.3. By End Use Industry (Electronics & Telecommunications, Industrial Sector, Defence & Security, Photovoltaics, Others)
 - 6.2.4. By Region
 - 6.2.5. By Company (2024)
 - 6.3. Market Map
- 7. Asia Pacific Near Infrared Absorbing Materials Market Outlook
 - 7.1. Market Size & Forecast
 - 7.1.1. By Value

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

7.2. Market Share & Forecast

7.2.1. By Material

7.2.2. By Function

7.2.3. By End Use Industry

7.2.4. By Country

7.3. Asia Pacific: Country Analysis

7.3.1. China Near Infrared Absorbing Materials Market Outlook

7.3.1.1. Market Size & Forecast

7.3.1.1.1. By Value

7.3.1.2. Market Share & Forecast

7.3.1.2.1. By Material

7.3.1.2.2. By Function

7.3.1.2.3. By End Use Industry

7.3.2. India Near Infrared Absorbing Materials Market Outlook

7.3.2.1. Market Size & Forecast

7.3.2.1.1. By Value

7.3.2.2. Market Share & Forecast

7.3.2.2.1. By Material

7.3.2.2.2. By Function

7.3.2.2.3. By End Use Industry

7.3.3. Australia Near Infrared Absorbing Materials Market Outlook

7.3.3.1. Market Size & Forecast

7.3.3.1.1. By Value

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

7.3.3.2. Market Share & Forecast

7.3.3.2.1. By Material

7.3.3.2.2. By Function

7.3.3.2.3. By End Use Industry

7.3.4. Japan Near Infrared Absorbing Materials Market Outlook

7.3.4.1. Market Size & Forecast

7.3.4.1.1. By Value

7.3.4.2. Market Share & Forecast

7.3.4.2.1. By Material

7.3.4.2.2. By Function

7.3.4.2.3. By End Use Industry

7.3.5. South Korea Near Infrared Absorbing Materials Market Outlook

7.3.5.1. Market Size & Forecast

7.3.5.1.1. By Value

7.3.5.2. Market Share & Forecast

7.3.5.2.1. By Material

7.3.5.2.2. By Function

7.3.5.2.3. By End Use Industry

8. Europe Near Infrared Absorbing Materials Market Outlook

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Material

8.2.2. By Function

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8.2.3. By End Use Industry

8.2.4. By Country

8.3. Europe: Country Analysis

8.3.1. France Near Infrared Absorbing Materials Market Outlook

8.3.1.1. Market Size & Forecast

8.3.1.1.1. By Value

8.3.1.2. Market Share & Forecast

8.3.1.2.1. By Material

8.3.1.2.2. By Function

8.3.1.2.3. By End Use Industry

8.3.2. Germany Near Infrared Absorbing Materials Market Outlook

8.3.2.1. Market Size & Forecast

8.3.2.1.1. By Value

8.3.2.2. Market Share & Forecast

8.3.2.2.1. By Material

8.3.2.2.2. By Function

8.3.2.2.3. By End Use Industry

8.3.3. Spain Near Infrared Absorbing Materials Market Outlook

8.3.3.1. Market Size & Forecast

8.3.3.1.1. By Value

8.3.3.2. Market Share & Forecast

8.3.3.2.1. By Material

8.3.3.2.2. By Function

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8.3.3.2.3. By End Use Industry

8.3.4. Italy Near Infrared Absorbing Materials Market Outlook

8.3.4.1. Market Size & Forecast

8.3.4.1.1. By Value

8.3.4.2. Market Share & Forecast

8.3.4.2.1. By Material

8.3.4.2.2. By Function

8.3.4.2.3. By End Use Industry

8.3.5. United Kingdom Near Infrared Absorbing Materials Market Outlook

8.3.5.1. Market Size & Forecast

8.3.5.1.1. By Value

8.3.5.2. Market Share & Forecast

8.3.5.2.1. By Material

8.3.5.2.2. By Function

8.3.5.2.3. By End Use Industry

9. North America Near Infrared Absorbing Materials Market Outlook

9.1. Market Size & Forecast

9.1.1. By Value

9.2. Market Share & Forecast

9.2.1. By Material

9.2.2. By Function

9.2.3. By End Use Industry

9.2.4. By Country

9.3. North America: Country Analysis

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

9.3.1. United States Near Infrared Absorbing Materials Market Outlook

9.3.1.1. Market Size & Forecast

9.3.1.1.1. By Value

9.3.1.2. Market Share & Forecast

9.3.1.2.1. By Material

9.3.1.2.2. By Function

9.3.1.2.3. By End Use Industry

9.3.2. Mexico Near Infrared Absorbing Materials Market Outlook

9.3.2.1. Market Size & Forecast

9.3.2.1.1. By Value

9.3.2.2. Market Share & Forecast

9.3.2.2.1. By Material

9.3.2.2.2. By Function

9.3.2.2.3. By End Use Industry

9.3.3. Canada Near Infrared Absorbing Materials Market Outlook

9.3.3.1. Market Size & Forecast

9.3.3.1.1. By Value

9.3.3.2. Market Share & Forecast

9.3.3.2.1. By Material

9.3.3.2.2. By Function

9.3.3.2.3. By End Use Industry

10. South America Near Infrared Absorbing Materials Market Outlook

10.1. Market Size & Forecast

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.1.1. By Value

10.2. Market Share & Forecast

10.2.1. By Material

10.2.2. By Function

10.2.3. By End Use Industry

10.2.4. By Country

10.3. South America: Country Analysis

10.3.1. Brazil Near Infrared Absorbing Materials Market Outlook

10.3.1.1. Market Size & Forecast

10.3.1.1.1. By Value

10.3.1.2. Market Share & Forecast

10.3.1.2.1. By Material

10.3.1.2.2. By Function

10.3.1.2.3. By End Use Industry

10.3.2. Argentina Near Infrared Absorbing Materials Market Outlook

10.3.2.1. Market Size & Forecast

10.3.2.1.1. By Value

10.3.2.2. Market Share & Forecast

10.3.2.2.1. By Material

10.3.2.2.2. By Function

10.3.2.2.3. By End Use Industry

10.3.3. Colombia Near Infrared Absorbing Materials Market Outlook

10.3.3.1. Market Size & Forecast

10.3.3.1.1. By Value

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.3.3.2. Market Share & Forecast

10.3.3.2.1. By Material

10.3.3.2.2. By Function

10.3.3.2.3. By End Use Industry

11. Middle East and Africa Near Infrared Absorbing Materials Market Outlook

11.1. Market Size & Forecast

11.1.1. By Value

11.2. Market Share & Forecast

11.2.1. By Material

11.2.2. By Function

11.2.3. By End Use Industry

11.2.4. By Country

11.3. MEA: Country Analysis

11.3.1. South Africa Near Infrared Absorbing Materials Market Outlook

11.3.1.1. Market Size & Forecast

11.3.1.1.1. By Value

11.3.1.2. Market Share & Forecast

11.3.1.2.1. By Material

11.3.1.2.2. By Function

11.3.1.2.3. By End Use Industry

11.3.2. Saudi Arabia Near Infrared Absorbing Materials Market Outlook

11.3.2.1.1. By Value

11.3.2.2. Market Share & Forecast

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 11.3.2.2.1. By Material
- 11.3.2.2.2. By Function
- 11.3.2.2.3. By End Use Industry

11.3.3. UAE Near Infrared Absorbing Materials Market Outlook

- 11.3.3.1. Market Size & Forecast
 - 11.3.3.1.1. By Value
- 11.3.3.2. Market Share & Forecast
 - 11.3.3.2.1. By Material
 - 11.3.3.2.2. By Function
 - 11.3.3.2.3. By End Use Industry

12. Market Dynamics

- 12.1. Drivers
- 12.2. Challenges

13. Market Trends & Developments

- 13.1. Recent Developments
- 13.2. Product Launches
- 13.3. Mergers & Acquisitions

14. Global Near Infrared Absorbing Materials Market: SWOT Analysis

15. Porter's Five Forces Analysis

- 15.1. Competition in the Industry
- 15.2. Potential of New Entrants
- 15.3. Power of Suppliers
- 15.4. Power of Customers
- 15.5. Threat of Substitute Product

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

16. Competitive Landscape

16.1. Sumitomo Metal Mining Co., Ltd.

16.1.1. Business Overview

16.1.2. Company Snapshot

16.1.3. Products & Services

16.1.4. Financials (As Reported)

16.1.5. Recent Developments

16.2. Nanophase Technologies Corporation

16.3. Heraeus Holding

16.4. Keeling & Walker Ltd.

16.5. Edmund Scientific Corporation

16.6. Nippon Shokubai Co., Ltd.

16.7. Resonac Holdings Corporation

16.8. Inframat Advanced Materials LLC

16.9. Epolin LLC

16.10. American Elements

17. Strategic Recommendations

18. About Us & Disclaimer

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Near Infrared Absorbing Materials Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Material (Organic, Inorganic), By Function (High Transparency, Absorption, Heat Resistance), By End Use Industry (Electronics & Telecommunications, Industrial Sector, Defence & Security, Photovoltaics, Others), By Region and Competition, 2020-2030F

Market Report | 2025-08-25 | 183 pages | TechSci Research

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4500.00
	Multi-User License	\$5500.00
	Custom Research License	\$8000.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-03-04"/>
		Signature	<input type="text"/>