



DOC.IV-7  
EDITION: 2025-Q3

VERTICALLY INTEGRATED SYSTEMS

# PRODUCT CATALOG

FIBER OPTICS & PHOTONICS

# 2025

**SCOPE:** Optoelectronic  
Components & Solutions

**APPLICATIONS:** Optical  
Communication, Consumer &  
Automotive

**KEY TECH:** VCSELs, PIN  
Photodiodes, SiGe BICMOS



# 01. WELCOME TO VI SYSTEMS

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VI SYSTEMS (VIS) DEVELOPS AND MANUFACTURES CUTTING-EDGE OPTOELECTRONIC COMPONENTS FOR COMMUNICATION, CONSUMER, AND AUTOMOTIVE APPLICATIONS. LOCATED IN THE HEART OF BERLIN, WE ARE A FABLESS COMPANY SPECIALIZING IN ULTRA-FAST SOLUTIONS FOR OPTICAL INTERCONNECTS AND SENSORS.

OUR PORTFOLIO INCLUDES VERTICAL CAVITY SURFACE-EMITTING LASERS (VCSELS) AND PIN PHOTODIODES DELIVERING SPEEDS UP TO 224 GBPS PER CHANNEL, ALONGSIDE DRIVER AND AMPLIFIER ICS OPERATING UP TO 56 GBPS. OUR LATEST GENERATION COMPONENTS ENABLE ENERGY-EFFICIENT 400 GBPS PAM-4 TRANSMISSION USING SHORT WAVE DIVISION MULTIPLEXING (SWDM).



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## 03. TECHNOLOGY & SERVICES

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### INTEGRATED OPTICAL SOLUTIONS

WE PAIR STATE-OF-THE-ART SIGE BICMOS INTEGRATED CIRCUITS WITH OUR ULTRAHIGH-SPEED VCSEL AND PIN COMPONENTS TO DELIVER OUTSTANDING PERFORMANCE.

### WAFER MAPPING SERVICES

COMPREHENSIVE ELECTRICAL AND OPTICAL TESTING ON 2" TO 8" WAFERS AT TEMPERATURES UP TO 150°C.

### HIGH-FREQUENCY TEST & CHARACTERIZATION

ELECTRO-OPTICAL PERFORMANCE MEASUREMENT WITH DATA MODULATION ANALYSIS UP TO 128 GBIT/S.



# 04. VCSEL TRANSMITTER MODULES

	<b>V25-850M</b> DATA RATE            28 GBPS (NRZ) WAVELENGTH        850 NM FIBER TYPE          50/125 MM	DATASHEET
	<b>V50-850M</b> DATA RATE            56 GBPS (PAM-4) WAVELENGTH        850 NM FIBER TYPE          50/125 MM	DATASHEET
	<b>VM100-850M</b> DATA RATE            112 GBPS (PAM-4) WAVELENGTH        850 NM FIBER TYPE          50/125 MM	DATASHEET
	<b>T56-850</b> DATA RATE            56 GBPS (NRZ) WAVELENGTH        850 NM FIBER TYPE          50/125 MM	DATASHEET
	<b>V25-1550M</b> WAVELENGTH        1550 NM DATA RATE            25 GBPS (NRZ) FIBER TYPE          9/125 MM	DATASHEET

## 05. OPTICAL RECEIVERS & PHOTODETECTORS

### R56-850

INPUT 700-870 NM  
WAVELENGTH  
DATA RATE (NRZ) 56 GBPS  
FIBER TYPE 50/125 MM

DATASHEET 

### D30-850M

3 DB BANDWIDTH > 30 GHZ  
WAVELENGTH 840-1650 NM  
FIBER TYPE 50/125 MM

DATASHEET 

### D60M FC

INPUT 400-1650 NM  
WAVELENGTH  
3 DB BANDWIDTH > 60 GHZ  
FIBER TYPE MMF/SMF

DATASHEET 



# 06. INTEGRATED CIRCUITS (ICS)

## HIGH SPEED VCSEL DRIVERS

### A56-230C

DATA RATE	UP TO 100 GBPS
SUPPLY VOLTAGE	3.3 V
POWER DISSIPATION	200 MW

DATASHEET

### A56-105C

DATA RATE	UP TO 56 GBPS
SUPPLY VOLTAGE	3.3 V
POWER DISSIPATION	105 MW

DATASHEET

### T56-250C

DATA RATE	UP TO 56 GBPS (NRZ)
DIFFERENTIAL GAIN	3.0 KΩ
POWER DISSIPATION	150 MW

DATASHEET



# 08. ULTRA HIGH-SPEED VCSEL CHIPS

SERIES: VM100 (MM / MA-SM / QSM)

	<b>VM100 850</b> CHIP TYPE            MULTI-MODE WAVELENGTH        840-860 NM CONTACT             GSG	DATASHEET
	<b>VM100 880</b> CHIP TYPE            MULTI-MODE WAVELENGTH        870-890 NM CONTACT             GSG	DATASHEET
	<b>VM100 910</b> CHIP TYPE            MULTI-MODE WAVELENGTH        900-920 NM CONTACT             GSG	DATASHEET
	<b>VM100 940</b> CHIP TYPE            MULTI-MODE WAVELENGTH        930-950 NM CONTACT             GSG	DATASHEET
	<b>VM100 850 MA-SM</b> CHIP TYPE            MA-SM WAVELENGTH        840-860 NM CONTACT             GSG	DATASHEET
	<b>VM100 850 QSM</b> CHIP TYPE            QSM WAVELENGTH        840-860 NM CONTACT             GSG	DATASHEET





VERTICALLY INTEGRATED SYSTEMS

DOC.IV-7  
PRODUCT-GROUP: CHIPS

TRANSMITTERS

RECEIVERS

ICS

CHIPS

## 09. HIGH-SPEED VCSEL CHIPS

SERIES: V50 / VM50 / V25

### V50 850

CHIP TYPE	MULTI-MODE
WAVELENGTH	840-860 NM
CONTACT	SG / GS

DATASHEET

### VM50 940

CHIP TYPE	MULTI-MODE
WAVELENGTH	930-950 NM
CONTACT	GSG

DATASHEET

### V25 940 HP MA

FEATURE	HIGH POWER (LIFI)
WAVELENGTH	930-950 NM
CONTACT	SG / GS

DATASHEET

### VM50 850

CHIP TYPE	MULTI-MODE
WAVELENGTH	840-860 NM
CONTACT	GSG

DATASHEET

### V25 850 HT

FEATURE	HIGH TEMP (125°C)
WAVELENGTH	840-860 NM
CONTACT	SG / GS

DATASHEET



# 10. HIGH-SPEED PHOTODIODES (PDS)

## SWDM-OPTIMIZED

	<b>D40 SWDM</b> CONTACT TYPE    GSG DIAMETER        20 MM BANDWIDTH       ~40 GHZ	DATASHEET
	<b>D35 SWDM</b> CONTACT TYPE    GSG DIAMETER        25 MM BANDWIDTH       ~35 GHZ	DATASHEET
	<b>D30 SWDM</b> CONTACT TYPE    GSG DIAMETER        ~23 MM BANDWIDTH       ~30 GHZ	DATASHEET
	<b>D70 SWDM</b> CONTACT TYPE    GSG DIAMETER        ~25 MM BANDWIDTH       ~70 GHZ	DATASHEET
	<b>D400G</b> CONTACT TYPE    GSG DIAMETER        ~16 MM BANDWIDTH       ~60 GHZ (25Ω)	DATASHEET



## 11. CONTACT INFORMATION

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FOR ADDITIONAL INFORMATION OR TO RECEIVE A QUOTATION, PLEASE CONTACT OUR SALES DEPARTMENT.

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