



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

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).



VERTICALLY INTEGRATED SYSTEMS

DOC.IV-7
TABLE OF CONTENTS

TRANSMITTERS

RECEIVERS

ICS

CHIPS

02. TABLE OF CONTENTS

02 WELCOME TO VI SYSTEMS

04 TECHNOLOGY & SERVICES

05 VCSEL TRANSMITTER MODULES

06 OPTICAL RECEIVERS & PHOTODETECTORS

07 INTEGRATED CIRCUITS (ICS)

08 VCSEL & PHOTODIODE CHIPS

09 CONTACT INFORMATION



VERTICALLY INTEGRATED SYSTEMS

DOC.IV-7
SERVICES OVERVIEW

TRANSMITTERS

RECEIVERS

ICS

CHIPS

03. TECHNOLOGY & SERVICES

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

V25-850M

| | |
|------------|---------------|
| DATA RATE | 28 GBPS (NRZ) |
| WAVELENGTH | 850 NM |
| FIBER TYPE | 50/125 MM |

DATASHEET



V50-850M

| | |
|------------|-----------------|
| DATA RATE | 56 GBPS (PAM-4) |
| WAVELENGTH | 850 NM |
| FIBER TYPE | 50/125 MM |

DATASHEET



VM100-850M

| | |
|------------|------------------|
| DATA RATE | 112 GBPS (PAM-4) |
| WAVELENGTH | 850 NM |
| FIBER TYPE | 50/125 MM |

DATASHEET



T56-850

| | |
|------------|---------------|
| DATA RATE | 56 GBPS (NRZ) |
| WAVELENGTH | 850 NM |
| FIBER TYPE | 50/125 MM |

DATASHEET





05. OPTICAL RECEIVERS & PHOTODETECTORS

R50-850

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

DATASHEET



D30-850M

| | |
|------------|------------------|
| DATA RATE | 112 GBPS (PAM-4) |
| WAVELENGTH | 840-1650 NM |
| FIBER TYPE | 50/125 MM |

DATASHEET





06. INTEGRATED CIRCUITS (ICS)

HIGH SPEED VCSEL DRIVERS

A56-230C

DATA RATE UP TO 56 GBPS

SUPPLY VOLTAGE 3.3 V

POWER 230 MW
DISSIPATION

DATASHEET



A56-105C

DATA RATE UP TO 56 GBPS

SUPPLY VOLTAGE 3.3 V

POWER 105 MW
DISSIPATION

DATASHEET





07. VCSEL & PHOTODIODE CHIPS

HIGH SPEED VCSEL CHIPS

V25-850C

DATA RATE 28 GBPS (NRZ)

WAVELENGTH 850 NM

PEAK OUTPUT
POWER 4 MW

DATASHEET



V50-850C

DATA RATE 56 GBPS (NRZ)

WAVELENGTH 850 NM

PEAK OUTPUT
POWER 4 MW

DATASHEET





VERTICALLY INTEGRATED SYSTEMS

DOC.IV-7
CONTACT & INFORMATION

TRANSMITTERS

RECEIVERS

ICS

CHIPS

08. CONTACT INFORMATION

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

ADDRESS VI
SYSTEMS GMBH,
HARDENBERGSTRASSE
7, 10623 BERLIN,
GERMANY

TELEPHONE +49 30 3083143 30

EMAIL SALES@V-I-
SYSTEMS.COM

WEB WWW.V-I-SYSTEMS.COM