Optical Lens

K9 Double-Concave Lens

The Economical Choice for Symmetrical Divergence

- Symmetrical Negative Power
- Material Quality
- Aberration Correction
- Precision Specs

One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Overview

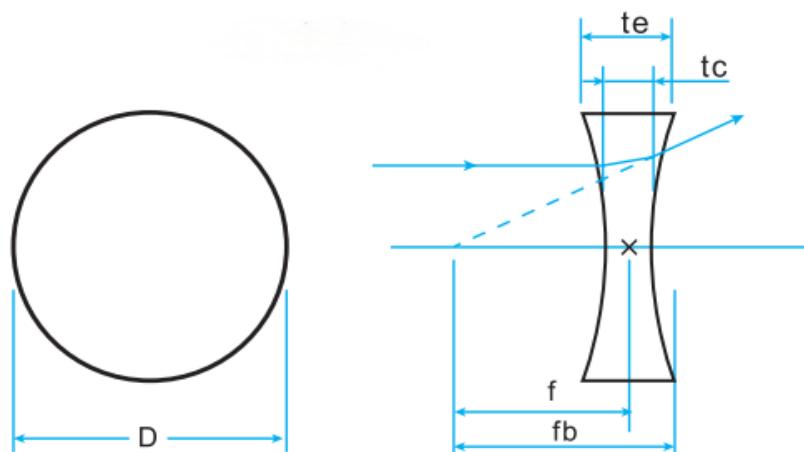**Symmetrical Precision: Balancing Optics with Negative Power**

The VenusLab DC-K9 Double-Concave Lens Series is a versatile solution for beam expansion and focal length extension. Unlike plano-concave lenses, bi-concave lenses feature identical radii of curvature on both surfaces. This symmetry yields optimal performance in applications where the **absolute conjugate ratio is close to 1:1**.

Typically used to diverge collimated beams or reduce magnification in converging paths, all lenses are precision polished with centration controlled within **3 arc minutes** (better than 1' for select models). They are essential components for building beam expanders, wide-angle illumination, and image reduction systems.

Key Applications
• **Image Reduction :** Shrinking the size of an image while increasing the field of view.
• **Beam Expansion :** Acting as the negative element in Galilean expanders.
• **Aberration Balancing :** Correcting spherical aberration introduced by positive lenses.

Dimension:

Qualification

DC-K9 Series Technical Specifications

Technical Parameter	Specification Data
Material	K9 (Grade A Optical Glass)
Shape	Bi-Concave
Design Wavelength	546.1nm (n=1.519)
Surface Quality	40-20 Scratch-Dig
Surface Power	1-5
Irregularity	0.2-1
Clear Aperture	> 90%
Centration	3' (Standard) / 1' (Precision)
Chamfer	0.25mm x 45°
Diameter Tolerance	+0.0 / -0.1 mm
Thickness Tolerance	± 0.1 mm
Focal Length Tolerance	± 1%

Selection Chart

DC-K9 Series Ordering Information & Model List

Model	D (mm)	f (mm)	Te (mm)	Tc (mm)	fb (mm)	r (mm)	Centration
VLDC-K9-06-06	6	-6	3.06	1.5	-6.776	6.75	1'
VLDC-K9-10-15	10	-15	3.6	2	-15.3	15.57	1'
VLDC-K9-10-20	10	-20	3.2	2	-20.3	20.76	1'
VLDC-K9-12-15	12.7	-15	4.7	2	-15.4	15.57	1'
VLDC-K9-12-25	12.7	-25	3.6	2	-25.4	25.95	1'
VLDC-K9-15-15	15	-15	5.9	2	-15.3	15.57	1'
VLDC-K9-15-20	15	-20	4.8	2	-20.3	20.76	1'
VLDC-K9-20-30	20	-30	5.3	2	-30.3	31.14	1'
VLDC-K9-20-50	20	-50	3.9	2	-50.3	51.9	1'
VLDC-K9-25-100	25	-100	3.4	2	-101	103.7	1'
VLDC-K9-25-200	25	-200	2.9	2	-201	204.5	1'
VLDC-K9-25A-25	25.4	-25	8.6	2	-25.4	25.95	1'
VLDC-K9-25A-50	25.4	-50	5.2	2	-50.4	51.9	1'
VLDC-K9-25A-70	25.4	-70	4.2	2	-70.4	72.66	1'
VLDC-K9-25A-100	25.4	-100	3.6	2	-100.4	103.8	1'
VLDC-K9-30-30	30	-30	9.7	2	-30.3	31.14	1'
VLDC-K9-30-60	30	-60	5.7	2	-60.3	62.28	1'
VLDC-K9-30-80	30	-80	4.7	2	-80.3	83.04	1'
VLDC-K9-50-100	50	-100	9.1	3	-100.5	103.8	1'
VLDC-K9-50-150	50	-150	7.2	3	-150.5	155.7	1'
VLDC-K9-50-200	50	-200	6.2	3	-200.2	207.5	1'
VLDC-K9-50-250	50	-250	5.3	3	-250.5	230	1'
VLDC-K9-50A-50	50.8	-50.8	16.3	3	-51.3	46	1'
VLDC-K9-50A-100	50.8	-100	9.3	3	-100.5	103.8	1'

Serivce & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

1. Warranty Policy
Quality First, Worry-Free Operation
Warranty Period: We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

Coverage: We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.
Rapid Response: Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

2. Technical Support
Expert Team, Full-Process Guidance
Technical Consultation: Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.
Scheduled Maintenance: We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.
Training Services: We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

3. Logistics & Delivery
Precision Packaging, Global Reach
Professional Packaging: Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.
Logistics Partners: We partner with top-tier global logistics providers **(DHL / FedEx / UPS / SF Express)** to offer reliable shipping with real-time tracking.
Shipping Insurance: All shipments are fully insured to eliminate logistics risks.

4. Compliance & Certification
Strict Standards, Total Compliance
Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE and RoHS.**
Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0 and REACH standards**, ensuring safety and global compliance."

Explore Series

Model	r (mm)	Tc (mm)	fb (mm)	Centration	Te (mm)	D (mm)
VLDC-K9-06-06	6.75	1.5	-6.776	1'	3.06	6
VLDC-K9-25A-50	51.9	2	-50.4	1'	5.2	25.4
VLDC-K9-50A-50	46	3	-51.3	1'	16.3	50.8

📩 Get in touch with our team to explore configurations,request a quote,or learn more about customized solutions tailored to your needs.

Let us help you moves cience forward—faster ands marter.