Verrillon®
an AFL company

OPTICAL FIBERS

Harsh Environment | Communications
Industrial | Military

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Harsh Environment Products

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM2000 Series

50/125/155 Carbon/Polyimide Enhanced Performance Graded Index, Multimode Fiber

P/N: MMF-50-3-CP-125-3

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Pure Synthetic SiO_2
Hermetic Coating	Carbon
Primary Coating	Polyimide

Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity *	(%)	≥ 80

Optical			
Property			
NA		(nominal)	0.20
Attenuation**	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300

Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* Measured as (Min Wall/Max Wall) x 100
** Measurement on Zero Tension Spool

Last Revised
09-30-2004
DS #115

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VHM2000 Series

50/125/155 Polyimide Coated Enhanced Performance Graded Index Multimode Fiber

P/N: MMF-50-3-P-125-3

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥80
Optical		
Property		
NA	(nominal)	0.200
Attenuation** @ 850nm	(dB/km)	≤ 3.0
@ 1300nm	(dB/km)	≤ 1.2
Bandwidth @ 850nm	(MHz-km)	≥ 300
@ 1300nm	(MHz-km)	≥ 300
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* Measured as (Min Wall/Max Wall) x 100
** Measurement on Zero Tension Spool

Last Revised
11-22-2006
DS # 120

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM2000 Series

50/125/400 Carbon/Silicone/PFA
Enhanced Performance
Graded Index Multimode Fiber

P/N: MMF-50-3-CSPFA-125-5

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Hermetic Coating			Carbon
Primary Coating			Silicone
Secondary Coating			PFA
PFA Color			Clear
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	400 ± 50
Optical			
Property			
NA		(nominal)	0.200
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test		(kpsi)	≥ 100
Operating Temperature		(°C)	-40 ≤ °C ≤ 200

Last Revised
12-05-2006
DS # 269

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Verrillon™
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VHM2000 Series

50/125/245 Silicone/Mid-Temp Acrylate Enhanced Performance Graded Index Multimode Fiber

P/N: MMF-50-3-SMTA-125-3

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Primary Coating			Silicone
Secondary Coating			Mid-Temp Acrylate
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	245 ± 20
Optical			
Property			
NA		(nominal)	0.20
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test		(kpsi)	≥ 100
Operating Temperature		(°C)	-40 ≤ °C ≤ 150

Last Revised
05-16-2005
DS # 184

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VHM2000 Series

50/125/245 Mid-Temp Dual Acrylate Enhanced Performance Graded Index, Multimode Fiber

PN: MMF-50-3-MTDA-125-3

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Pure Synthetic SiO_2
Primary Coating	Mid-Temp Acrylate
Secondary Coating	Mid-Temp Acrylate
Geometry	
Dimension	
Core Diameter (µm)	50 ± 2.5
Clad Diameter (µm)	125 ± 2
Core Non-Circularity (%)	≤ 5
Clad Non-Circularity (%)	≤ 1
Core/Clad Offset (µm)	≤ 1.5
Coat Diameter (µm)	245 ± 5
Optical	
Property	
NA (nominal)	0.200 ± 0.015
Attenuation* @ 850nm (dB/km)	≤ 2.5
@ 1300nm (dB/km)	≤ 0.7
Bandwidth @ 850nm (MHz-km)	≥ 400
@ 1300nm (MHz-km)	≥ 400
Mechanical	
Property	
Proof Test (kpsi)	≥ 100
Operating Temperature (°C)	-60 ≤ °C ≤ +150

** Measured on a zero tension spool*

Last Revised
04/28/2008
DS # 324

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Verrillon™
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VHM3000 Series

50/125/155 Carbon/Polyimide
Elite Performance
Graded Index, Multimode Fiber

P/N: MMF-50-6-CP-125-6

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Doped Synthetic SiO_2
Hermetic Coating	Carbon
Primary Coating	Polyimide

Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity *	(%)	≥80

Optical			
Property			
NA		(nominal)	0.20
Attenuation**	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300

Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* Measured as (Min Wall/Max Wall) x 100
** Measurement on Zero Tension Spool

Last Revised
04-24-2008
DS #340

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM3000 Series

50/125/155 Polyimide Coated
Elite Performance
Graded Index, Multimode Fiber

P/N: MMF-50-6-P-125-6

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Doped Synthetic SiO_2
Primary Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity *	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.200
Attenuation** @ 850nm	(dB/km)	≤ 3.0
@ 1300nm	(dB/km)	≤ 1.2
Bandwidth @ 850nm	(MHz-km)	≥ 300
@ 1300nm	(MHz-km)	≥ 300
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* Measured as (Min Wall/Max Wall) x 100
** Measurement on Zero Tension Spool

Last Revised
04-24-2008
DS #339

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM3000 Series

50/125/700 Carbon/Silicone/PFA
Elite Performance
Graded Index, Multimode Fiber

P/N: MMF-50-6-CSPFA-125-3

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Hermetic Coating			Carbon
Primary Coating			Silicone
Secondary Coating			PFA
PFA Color			Clear
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	700 ± 50
Optical			
Property			
NA		(nominal)	0.20
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test (kpsi)			≥ 100
Operating Temperature (°C)			-40 ≤ °C ≤ 200

Last Revised
01-12-2010
DS # 381

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM3000 Series

50/125/200/245 Carbon/Silicone/MTA
Elite Performance
Graded Index, Multimode Fiber

P/N: MMF-50-6-CSMTA-125-6

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Hermetic Coating			Carbon
Primary Coating			Silicone
Secondary Coating			Mid-Temp Acrylate
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Primary Coating Diameter		(µm)	200 ± 25
Secondary Coating Diameter		(µm)	245 ± 20
Optical			
Property			
NA		(nominal)	0.20
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test (kpsi)			≥ 100
Operating Temperature (°C)			-40 ≤ °C ≤ 150

Last Revised
01-13-2010
DS # 382

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM4000 Series

50/125/155 Carbon/Polyimide
Exact Performance
Step Index, Multimode Fiber

P/N: MMF-50-5-CP-125-5

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Doped Synthetic SiO_2
Hermetic Coating	Carbon
Primary Coating	Polyimide
Geometry	
Dimension	
Core Diameter (µm)	50 ± 3.0
Clad Diameter (µm)	125 ± 2
Core Non-Circularity (%)	≤ 5
Clad Non-Circularity (%)	≤ 1
Core/Clad Offset (µm)	≤ 1.5
Coat Diameter (µm)	155 ± 5
Polyimide Coating Concentricity* (%)	≥ 80
Optical	
Property	
NA (nominal)	0.20
Attenuation** @ 850nm (dB/km)	≤ 3.0
@1060nm (dB/km)	≤1.3
@ 1300nm (dB/km)	≤ 1.0
Mechanical	
Property	
Proof Test (kpsi)	≥ 100
Operating Temperature (°C)	-65 ≤ °C ≤ +300

* *Measured as (Min Wall/Max Wall) x 100*
** *Measurement on Zero Tension Spool*

Last Revised
05-17-2007
DS # 289

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM4000 Series

50/125/155 Polyimide Coated
Exact Performance
Step Index, Multimode Fiber

P/N: MMF-50-5-P-125-5

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Doped Synthetic SiO_2
Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	50 ± 3
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity *	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.20
Attenuation** @ 850nm	(dB/km)	≤ 3.0
@1060nm	(dB/km)	≤1.3
@1300nm	(dB/km)	≤ 1.0
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* *Measured as (Min Wall/Max Wall) x 100*
** *Measurement on Zero Tension Spool*

Last Revised
11-12-2007
DS # 309

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM5000 Series

50/125 Carbon/Polyimide coated
Ultimate Performance
Graded Index, Multimode Fiber

PN: MMF-50-4-CP-125-4

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Doped Synthetic SiO_2
Hermetic Coating		Carbon
Primary Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥80
Optical		
Property		
NA	(nominal)	0.20
Attenuation** @ 850nm	(dB/km)	≤ 3.0
@ 1300nm	(dB/km)	≤ 1.2
Bandwidth @ 850nm	(MHz-km)	≥ 300
@ 1300nm	(MHz-km)	≥ 300
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

** Measured as (Min Wall/Max Wall) x 100*
*** Measurement on Zero Tension Spool*

Last Revised
11-17- 2010
DS # 293

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Verrillon™
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VHM5000 Series

50/125 Polyimide coated
Ultimate Performance
Graded Index, Multimode Fiber

PN: MMF-50-4-P-125-4

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Doped Synthetic SiO_2
Primary Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	50 ± 2.5
Clad Diameter	(µm)	125 ± 2
Core Non-Circularity	(%)	≤ 5
Clad Non-Circularity	(%)	≤ 1
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥80
Optical		
Property		
NA	(nominal)	0.20
Attenuation** @ 850nm	(dB/km)	≤ 3.0
@ 1300nm	(dB/km)	≤ 1.2
Bandwidth @ 850nm	(MHz-km)	≥ 300
@ 1300nm	(MHz-km)	≥ 300
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

** Measured as (Min Wall/Max Wall) x 100*
*** Measurement on Zero Tension Spool*

Created
11-18- 2010
DS # 402

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM5000 Series

50/125/400 Carbon/Silicone/PFA
Ultimate Performance
Graded Index, Multimode Fiber

P/N: MMF-50-4-CSPFA-125-5

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Doped Synthetic SiO_2
Hermetic Coating			Carbon
Primary Coating			Silicone
Secondary Coating			PFA
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	400 ± 50
Optical			
Property			
NA		(nominal)	0.20
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test		(kpsi)	≥ 100
Operating Temperature		(°C)	-40 ≤ °C ≤ 200

Last Revised
11-17-2010
DS # 396

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Verrillon™
THE FIBER IN FIBEROPTICS

VHM5000 Series

50/125/400 Silicone/PFA
Ultimate Performance
Graded Index, Multimode Fiber

P/N: MMF-50-4-SPFA-125-5

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Primary Coating			Silicone
Secondary Coating			PFA
Geometry			
Dimension			
Core Diameter		(µm)	50 ± 2.5
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	400 ± 50
Optical			
Property			
NA		(nominal)	0.20
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 1.2
Bandwidth	@ 850nm	(MHz-km)	≥ 300
	@ 1300nm	(MHz-km)	≥ 300
Mechanical			
Property			
Proof Test		(kpsi)	≥ 100
Operating Temperature		(°C)	-40 ≤ °C ≤ 200

Last Revised
11-17-2010
DS # 380

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Verrillon™
THE FIBER IN FIBEROPTICS

VHS100 Series

125/155 Carbon/Polyimide
Single Mode Fiber, 0.12NA, 100kpsi

P/N: SMF-1-CP-125-3

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Hermetic Coating		Carbon
Coating		Polyimide
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 2
Core/Clad Offset	(µm)	≤ 0.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.12
Attenuation** @ 1310nm	(dB/km)	≤ 0.7
@ 1550nm	(dB/km)	≤ 0.6
Cutoff Wavelength	(nm)	1250 ± 50
Mode Field Diameter*** @ 1310nm	(µm)	9.2 ± 0.6
Mode Field Diameter*** @ 1550nm	(µm)	10.4 ± 0.8
Mechanical		
Property		
Tensile Strength	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* *Measured as: (Min. Wall / Max. Wall) x 100*
** *Measured on Zero Tension spool*
*** *Petermann II Definition*

Last Revised
05-06-2004
DS # 85

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Verrillon™
THE FIBER IN FIBEROPTICS

VHS100 Series

125/155 Polyimide coated
Single Mode Fiber, 0.12NA, 100kpsi

P/N: SMF-1-P-125-3

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Coating		Polyimide
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 2
Core/Clad Offset	(µm)	≤ 0.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.12
Attenuation** @ 1310nm	(dB/km)	≤ 0.7
@ 1550nm	(dB/km)	≤ 0.6
Cutoff Wavelength	(nm)	1250 ± 50
Mode Field Diameter*** @ 1310nm	(µm)	9.2 ± 0.6
Mode Field Diameter*** @ 1550nm	(µm)	10.4 ± 0.8
Mechanical		
Property		
Tensile Strength	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* *Measured as (Min Wall / Max Wall) x 100*
** *Measured on Zero Tension spool*
*** *Petermann II definition*

Last Revised
04-29-2004
DS # 83

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VHS300 Series

125/155 Carbon-Polyimide
Pure Silica Core, Singlemode Fiber
0.12NA, 100kpsi

P/N: SMF-40-CP-125-1

Material		
Component		***Specification***
Core		Pure Synthetic SiO_2
Clad		F-doped Synthetic SiO_2
Hermetic Coating		Carbon
Coating		Polyimide
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 2
Core/Clad Offset	(µm)	≤ 0.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.12
Attenuation** @ 1310nm	(dB/km)	≤ 0.8
@ 1550nm	(dB/km)	≤ 0.8
Cutoff Wavelength	(nm)	1250 ± 50
Mode Field Diameter*** @ 1310nm	(µm)	9.2 ± 0.6
Mode Field Diameter*** @ 1550nm	(µm)	10.4 ± 0.8
Mechanical		
Property		
Tensile Strength	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* *Measured as (Min Wall / Max Wall) x 100*
** *Measured on Zero Tension spool*
*** *Petermann II definition*

Last Revised
06-24-2004
DS # 190

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VHS300 Series

125/155 Polyimide Coated
Pure Silica Core, Singlemode Fiber
0.12NA, 100kpsi

P/N: SMF-40-P-125-1

Material		
Component		***Specification***
Core		Pure Synthetic SiO_2
Clad		F-Doped Synthetic SiO_2
Coating		Polyimide
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 2
Core/Clad Offset	(µm)	≤ 0.5
Coat Diameter	(µm)	155 ± 5
Polyimide Coating Concentricity*	(%)	≥ 80
Optical		
Property		
NA	(nominal)	0.12
Attenuation** @ 1310nm	(dB/km)	≤ 0.8
@ 1550nm	(dB/km)	≤ 0.8
Cutoff Wavelength	(nm)	1250 ± 50
Mode Field Diameter*** @ 1310nm	(µm)	9.2 ± 0.6
Mode Field Diameter*** @ 1550nm	(µm)	10.4 ± 0.8
Mechanical		
Property		
Tensile Strength	(kpsi)	≥ 100
Operating Temperature	(°C)	-65 ≤ °C ≤ +300

* *Measured as (Min Wall / Max Wall) x 100*
** *Measured on Zero Tension spool*
*** *Petermann II definition*

Last Revised
12-06-2007
DS # 312

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Communications Products

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THE FIBER IN FIBEROPTICS

VSS200 Series

980nm Acrylate Coated
Coupler Fiber, 0.20 NA, 200kpsi

P/N: CF-4-125-20-1

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Pure Synthetic SiO_2
Coating	Dual UV Acrylate
Geometry	
Dimension	
Clad Diameter (µm)	125 ± 1
Clad Non-Circularity (%)	≤2
Core/Clad Offset (µm)	≤ 0.3
Coat Diameter (µm)	245 ± 15
Optical	
Property	
NA (nominal)	0.20
Attenuation @ 980nm (dB/km)	≤ 3.5
Cutoff wavelength (nm)	≤960
MFD* @ 980nm (µm)	4.2 ± 0.3
Mechanical	
Property	
Proof Test (kpsi)	200
Operating Temperature (° C)	-40≤°C ≤+85

** Petermann II definition*

Last Revised
01-13-2011
DS # 288

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Verrillon™
THE FIBER IN FIBEROPTICS

VSS200 Series

980nm Acrylate coated
Coupler Fiber, 0.16 NA, 200kpsi

P/N: CF-2-125-0

Material	
Component	***Specification***
Core	Doped Synthetic SiO_2
Clad	Pure Synthetic SiO_2
Coating	Dual UV Acrylate

Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 1
Core/Clad Offset	(µm)	≤ 0.3
Coat Diameter	(µm)	245 ± 15

Optical		
Property		
NA	(nominal)	0.16
Attenuation @ 980nm	(dB/km)	≤ 3.0
Cutoff wavelength	(nm)	≤960
MFD * @ 980nm	(µm)	5.0 ± 0.3

Mechanical		
Property		
Tensile Strength	(kpsi)	≥200
Operating Temperature	(° C)	-40≤°C ≤+85

** Petermann II definition*

Last Revised
06-07-2004
DS # 94

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Verrillon™
THE FIBER IN FIBEROPTICS

VSS200 Series

1310/1550nm Acrylate Coated Coupler Fiber, 0.13NA, 200kpsi

P/N: CF-5-125-2

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Coating		Dual UV Acrylate
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 1
Core/Clad Offset	(µm)	≤ 0.5
Coat Diameter	(µm)	245 ± 15
Optical		
Property		
NA	(nominal)	0.13
Attenuation @1310nm	(dB/km)	≤0.5
Attenuation @1550nm	(dB/km)	≤0.5
Cutoff wavelength	(nm)	1250 ± 40
MFD * @ 1310 nm	(µm)	8.6 ± 0.5
MFD * @ 1550 nm	(µm)	9.7 ± 0.5
Bend Loss** @ 1310nm	(dB)	≤0.25
Bend Loss** @ 1550nm	(dB)	≤0.25
Mechanical		
Property		
Tensile Strength	(kpsi)	≥200
Operating Temperature	(° C)	-40≤°C ≤+85

** Petermann II definition*
*** 10 turns of fiber on a 30mm diameter*

Last Revised
02-06-2007
DS # 271

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THE FIBER IN FIBEROPTICS

VHM2000 Series

62.5/125/245 Silicone/Mid-Temp Acrylate Graded Index, Multimode Fiber 0.275 NA, 150 kpsi

P/N: MMF-62.5-1-SMTA-125-2

Material			
Component			***Specification***
Core			Doped Synthetic SiO_2
Clad			Pure Synthetic SiO_2
Primary Coating			Silicone
Secondary Coating			Mid- Temp Acrylate
Geometry			
Dimension			
Core Diameter		(µm)	62.5 ± 3
Clad Diameter		(µm)	125 ± 2
Core Non-Circularity		(%)	≤ 5
Clad Non-Circularity		(%)	≤ 1
Core/Clad Offset		(µm)	≤ 1.5
Combined Coating Diameter		(µm)	245 ± 20
Optical			
Property			
NA		(nominal)	0.275
Attenuation	@ 850nm	(dB/km)	≤ 3.0
	@ 1300nm	(dB/km)	≤ 0.8
Bandwidth	@ 850nm	(MHz-km)	≥ 160
	@ 1300nm	(MHz-km)	≥ 500
Mechanical			
Property			
Proof Test		(kpsi)	≥ 150
Operating Temperature		(°C)	-40 ≤ °C ≤ 150

Last Revised
06-21-2006
DS # 231

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VSM1000 Series

105/125/250 Low OH Silica Core
Silicone-Mid Temp Acrylate coated
Step Index, Multimode Fiber
0.22 NA, 100kpsi

P/N: MMF-105-1-SMTA-125-250-1

Material		
Component		***Specification***
Core		Synthetic SiO_2
Clad		Doped Fused SiO_2
Primary Coating		Silicone
Secondary Coating		Medium Temp Acrylate
Geometry		
Dimension		
Core Diameter	(µm)	105 ± 5
Clad Diameter	(µm)	125 ± 5
Core/Clad Offset	(µm)	≤ 3.0
Combined Coat Diameter	(µm)	250 ± 15
Optical		
Property		
NA	(nominal)	0.22
Attenuation @ 808nm	(dB/km)	≤ 20
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(° C)	-40≤°C≤+150

Last Revised
01-10-2007
DS# 274

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THE FIBER IN FIBEROPTICS

VSM1000 Series

105/125/250 Low OH Silica Core, Silicone/Mid-Temp Acrylate coated Step Index, Multimode Fiber 0.15 NA, 100kpsi

P/N: MMF-105-1-SMTA-125-250-2

Material		
Component		***Specification***
Core		Synthetic SiO_2
Clad		Doped Fused SiO_2
Primary Coating		Silicone
Secondary Coating		Medium Temp Acrylate
Geometry		
Dimension		
Core Diameter	(µm)	105 ± 5
Clad Diameter	(µm)	125 ± 3
Core/Clad Offset	(µm)	≤ 3.0
Combined Coat Diameter	(µm)	250 ± 10
Optical		
Property		
NA	(nominal)	0.15
Attenuation @ 808nm	(dB/km)	≤ 20
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(° C)	-40 ≤°C ≤+150

Last Revised
01-29-2008
DS# 319

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VSM1000 Series

100/140/172 Polyimide Coated Graded Index, Multimode Fiber 0.29 NA, 200kpsi

P/N: MMF-100-2-P-140-2

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Coating		Polyimide
Geometry		
Dimension		
Core Diameter	(µm)	100 ± 3
Clad Diameter	(µm)	140 ± 3
Core/Clad Offset	(µm)	≤ 6.0
Coat Diameter	(µm)	172 ± 2
Coating Concentricity *	(%)	≥80
Optical		
Property		
NA	(nominal)	0.29
Attenuation ** @ 850nm	(dB/km)	≤ 5.0
Bandwidth @ 850nm	(MHz-km)	≥100
Mechanical		
Property		
Proof Test	(kpsi)	≥ 200
Operating Temperature	(°C)	-65<°C<+300

* *Measured as (Min Wall / Max Wall) x 100*
** *Measured on Zero Tension Spool*

Last Revised
04-26-2005
DS # 179

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VPM400 Series

80um Select Clad
Polarization Maintaining
Single Mode Fiber

P/N: PMF-9-A-80-1

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Coating		Dual UV Acrylate
Stress Inducing Design		Elliptical Clad Design
Geometry		
Dimension		
Clad Diameter	(µm)	80 ± 2
Core/Clad Concentricity	(µm)	≤ 1.0
Coat Diameter	(µm)	165 ± 10
Optical		
Property		
NA	(nominal)	0.20
Attenuation @ 1550nm	(dB/km)	≤ 5.0
Mode Field Diameter @ 1550nm *	(µm)	7.0 ± 1.0
Cut-Off Wavelength	(nm)	≤ 1480
Beat Length @ 1550nm	(mm)	≤ 2.00
Bend Loss @1550nm**	(dB/Turn)	≤ 0.05
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100
Operating Temperature	(°C)	-10 < °C < 70

** Gaussian Definition*
*** 12mm diameter mandrel*

Last Revised
02-16-2009
DS # 366

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VPZ600 Series

Single Polarization Fiber
125µm Elliptical Clad
1550nm Operating Wavelength
0.12NA, 100kpsi

P/N: PZF-1-A-125-2

Material		
Component		***Specification***
Core		Doped Synthetic SiO_2
Clad		Pure Synthetic SiO_2
Primary Coating		UV Acrylate
Secondary Coating		UV Acrylate
Stress Inducing Design		Elliptical Clad Design
Geometry		
Dimension		
Clad Diameter	(µm)	125 ± 2
Core/Clad Offset	(µm)	≤ 1.5
Coat Diameter	(µm)	245 ± 15
Optical		
Property		
NA	(nominal)	0.12
Attenuation @ 1550nm	(dB/m)	≤ 0.05
Mode Field Diameter* @ 1550nm	(µm)	10 ± 1.0
Polarization Extinction Ratio**	(dB)	≥30
Mechanical		
Property		
Proof Test	(kpsi)	≥ 100

* *Peterman II Definition*
** *Measured on five meter in loose coil.*

Last Revised
03-04-2010
DS #368

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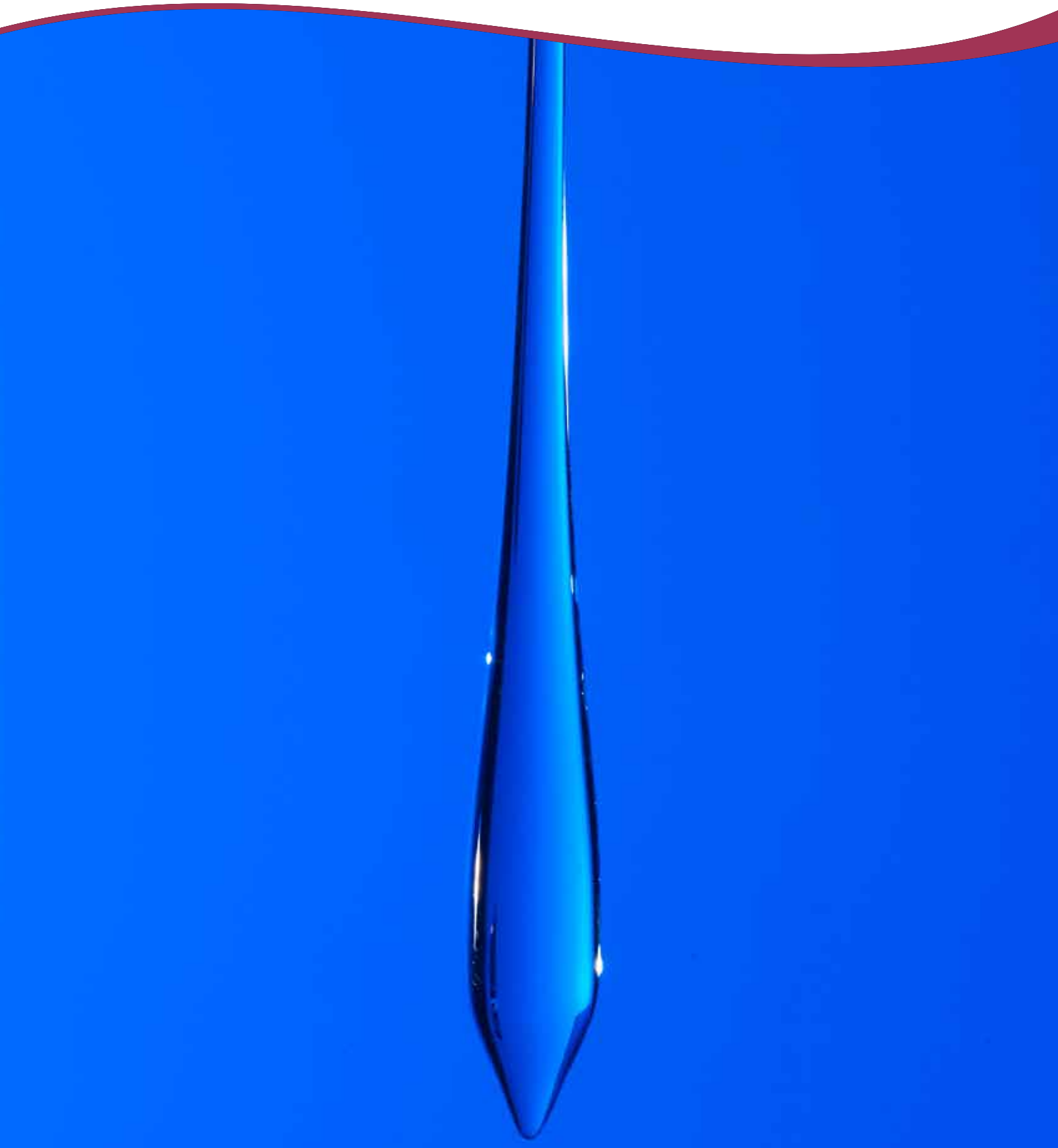

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