FIMMWAVE/FIMMPROP , version 4.0.0

Feature/Option Table (CFG3)

Feature	Base	Complex Engine	Fimmprop (Opt05)	General Fibre Module (Opt06)	Thermal/EO Module (Opt07)	
FMM Mode Solver - real, rectangular geometry index profiles	☑					
FMM Mode Solver - complex rectangular geometry index profiles		☑				
Effective Index Solver - real, rectangular geometry index profiles	☑					
Effective Index Solver - complex, rectangular geometry index profiles		☑				
Scalar mode solver for step-index fibre	☑			☑		
Gaussian mode solver for fibre geometries	☑			☑		
General Fibre Solver – arbitrary radial profile Ne(r), circularly symmetric, real index				☑		
Far-field Calculator	☑					
Efficient free-space propagation (waveguide-gap-waveguide geometry in FIMMPROP)			☑			
Bi-directional optical propagation			☑			
Reflections due to coatings			☑			
Propagation due to arbitrary beam input			☑			
Propagation with absorbing computational boundaries		☑	☑			
Propagation in the presence of strongly absorbing regions (e.g. metals)		☑	☑			
Heat flow calculation using 2D Poisson Solver, effect of heating on modes.					☑	
Electro-optic effect simulation with 2D anisotropic Poisson Solver, effect of E-field on modes. E.g. for design of EO switches					☑	

Rectangular Geometry Waveguides	☑					
Cylindrical Geometry Waveguides				☑		
Geometrical Shapes Waveguides (ellipses, rectangles and polygons)	☑					

FIMMWAVE - a vectorial 2D waveguide solver, version 4.0.0

Mode Solvers

Feature	Real FMM Solver	Complex FMM Solver	Real Effective Index Solver	Complex Effective Index Solver	General Fibre Solver (Real)	
Rectangular Geometry Waveguides	☑☑	☑☑	☑☑			
Cylindrical Geometry Waveguides – arbitrary Ne(r)	☑	☑			☑☑	
Geometrical Shapes Waveguides (ellipses, rectangles and polygons)	☑☑	☑☑	☑☑	☑☑		
Graded index waveguides including diffused waveguides	☑☑	☑☑	☑☑	☑☑		
Anisotropic refractive index	☑☑	☑☑				
MOLAB - Fully automatic mode finder	☑☑		☑☑	☑☑	☑☑	
Works with FIMMPROP-3D	☑☑	☑☑	☑☑	☑☑	☑☑	
Periodic boundary conditions	☑☑	☑☑				
Metal/Magnetic wall boundary conditions	☑☑	☑☑	☑☑	☑☑	☑☑	
Transparent boundary conditions					☑☑	
PML boundary conditions		☑☑		☑☑		

KEY	Real FMM Solver
☑☑	Fully supported capability
☑	Some capability, but not the most accurate or recommended use

FIMMWAVE - a vectorial 2D waveguide solver, version 3.3

Feature/Option Table (CFG2)

Feature	Base	Complex Engine	Fimmprop-3D (Opt05)	Free Space Module (Opt04)	Simple Fibre Module (Opt02)	General Fibre Module (Opt06)	Thermal Profiler (Opt07)
FMM Mode Solver - real, rectangular geometry index profiles	☑						
FMM Mode Solver - complex rectangular geometry index profiles		☑					
Scalar mode solver for step-index fibre					☑	☑	
Gaussian mode solver for fibre geometries					☑	☑	
General Fibre Solver – arbitrary radial profile Ne(r), circularly symmetric, real index						☑	
Far-field Calculator				☑			
Efficient free-space propagation (waveguide-gap-waveguide geometry in FIMMPROP-3D)				☑			
Bi-directional optical propagation			☑				
Heat flow calculation using 2D Poisson Solver, effect of heating on modes.							☑
Rectangular Geometry Waveguides	☑						
Cylindrical Geometry Waveguides					☑	☑	
Geometrical Shapes Waveguides (ellipses, rectangles and polygons)	☑						