Cheat sheet for pst-optexp (v4.5)

General component parameters

labeloffset=⟨*num*⟩
labelstyle=⟨*macros*⟩
labelalign=⟨*refpoint*⟩
labelangle=⟨*num*⟩
labelref=relative, relgrav, global, absolute
label=⟨*offset*⟩[⟨*angle*⟩[⟨*refpoint*⟩[⟨*labelref*⟩]]]
innerlabel=true
position=⟨*num*⟩, start, end
abspos=⟨*num*⟩, start, end
endbox=true, false
angle=⟨*pscode*⟩
rotateref=⟨*refpoint*⟩
compshift=⟨*num*⟩
compoffset=⟨*num*⟩
innercompalign=rel, relative, abs, absolute
OptComp ⟨*psstyle*⟩
OptionalStyle ⟨*psstyle*⟩
VariableStyle ⟨*psstyle*⟩
addtoOptComp=⟨*list*⟩
newOptComp=⟨*list*⟩
optional=true, false

Free-ray components

\lens[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}

lensheight=⟨*num*⟩
lensradiusleft=⟨*num*⟩
lensradiusright=⟨*num*⟩
lensradius=⟨*left*⟩[⟨*right*⟩]
lenswidth=⟨*num*⟩
lens=⟨*radiusleft*⟩[⟨*radiusright*⟩[⟨*height*⟩[⟨*width*⟩]]]
thicklens=true, false

\optplate[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
plateheight=⟨*num*⟩
platelinewidth=⟨*num*⟩ or ⟨*dimen*⟩

\optretplate[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
platewidth=⟨*num*⟩
platesize=⟨*width*⟩ ⟨*height*⟩

\pinhole[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
outerheight=⟨*num*⟩
innerheight=⟨*num*⟩
phlinewidth=⟨*num*⟩ or ⟨*dimen*⟩
phwidth=⟨*num*⟩

\optbox[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
optboxwidth=⟨*num*⟩
optboxheight=⟨*num*⟩
optboxsize=⟨*width*⟩ ⟨*height*⟩

\optarrowcomp[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
arrowcompwidth=⟨*num*⟩
arrowcompheight=⟨*num*⟩
arrowcompsize=⟨*size*⟩ or ⟨*width*⟩ ⟨*height*⟩
arrowcompangle=⟨*num*⟩
arrowcompshape=rectangle, circle
ArrowCompStyle ⟨*psstyle*⟩

\optbarcomp[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
barcompwidth=⟨*num*⟩
barcompheight=⟨*num*⟩
barcompsize=⟨*size*⟩ or ⟨*width*⟩ ⟨*height*⟩
barcompangle=⟨*num*⟩
barcompshape=rectangle, circle
BarCompStyle ⟨*psstyle*⟩

\crystal[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
crystalwidth=⟨*num*⟩
crystalheight=⟨*num*⟩
crystalsize=⟨*width*⟩ ⟨*height*⟩
caxislength=⟨*num*⟩
caxisinv=true, false
voltage=true, false
lamp=true, false
CrystalCaxis ⟨*psstyle*⟩
CrystalLamp ⟨*psstyle*⟩

\optdiode[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
optdiodesize=⟨*num*⟩

\doveprism[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
doveprismsize=⟨*num*⟩ or ⟨*width*⟩ ⟨*height*⟩

\glanthompson[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
glanthompsonwidth=⟨*num*⟩
glanthompsonheight=⟨*num*⟩
glanthompsonsize=⟨*width*⟩ ⟨*height*⟩
glanthompsongap=⟨*num*⟩

\polarization[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
polsize=⟨*num*⟩
poltype=parallel, perp, misc, lcirc, rcirc
Polarization ⟨*psstyle*⟩

\mirror[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
mirrorwidth=⟨*num*⟩
mirrorlinewidth=⟨*num*⟩ or ⟨*dimen*⟩
mirrorradius=⟨*radius*⟩[0]
mirrortype=plain, piezo, extended, semitrans
variable=true, false
mirrordepth=⟨*num*⟩
ExtendedMirror ⟨*psstyle*⟩
PiezoMirror ⟨*psstyle*⟩
SemitransMirror ⟨*psstyle*⟩

\beamsplitter[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
bssize=⟨*num*⟩
bsstyle=cube, plate

\optgrating[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
gratingwidth=⟨*num*⟩
gratingheight=⟨*num*⟩
gratingdepth=⟨*num*⟩
gratingcount=⟨*int*⟩
gratingtype=blazed, binary
gratingalign=t, top, c, center
reverse=true, false
gratinglinewidth=⟨*num*⟩ or ⟨*dimen*⟩

\transmissiongrating[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
\optprism[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
prismsize=⟨*num*⟩
prismangle=⟨*num*⟩
prismtype=transmittive, reflective
prismalign=auto, center

\rightangleprism[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
raprismsize=⟨*num*⟩

raprismalign=auto, center

\pentaprism[⟨opt⟩](⟨in⟩)(⟨center⟩)(⟨out⟩){⟨label⟩}
pentaprismsize=⟨num⟩

Fiber components

usefiberstyle=true, false
usewirestyle=true, false

\optfiber[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
fiberloops=⟨int⟩
fiberloopradius=⟨num⟩
fiberloopsep=⟨num⟩

\optamp[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
optampsize=⟨num⟩ or ⟨width⟩ ⟨height⟩

\optmzm[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
optmzmsize=⟨num⟩ or ⟨width⟩ ⟨height⟩

\polcontrol[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
polcontrolsize=⟨num⟩
polcontroltype=linear, triangle

\optisolator[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
isolatorsize=⟨num⟩ or ⟨width⟩ ⟨height⟩
IsolatorArrow ⟨psstyle⟩

\optswitch[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
switchsize=⟨num⟩ or ⟨width⟩ ⟨height⟩
switchstyle=opened, closed

\fiberdelayline[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
fdlsize=⟨num⟩ or ⟨width⟩ ⟨height⟩
FdlArrow ⟨psstyle⟩

\optfiberpolarizer[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
fiberpolsize=⟨num⟩ or ⟨width⟩ ⟨height⟩

\optcirculator(⟨left⟩)(⟨right⟩)(⟨bottom⟩){⟨label⟩}
optcircsize=⟨num⟩
optcircangleA=⟨num⟩
optcircangleB=⟨num⟩
optcircangle=⟨num⟩ ⟨num⟩
OptCircArrow ⟨psstyle⟩

\optcoupler(⟨tl⟩)(⟨bl⟩)(⟨tr⟩)(⟨br⟩){⟨label⟩}
\wdmcoupler(⟨tl⟩)(⟨bl⟩)(⟨r⟩){⟨label⟩}
\wdmsplitter(⟨l⟩)(⟨tr⟩)(⟨br⟩){⟨label⟩}
couplersize=⟨num⟩ or ⟨width⟩ ⟨height⟩
couplersep=⟨num⟩
couplertype=none, ellipse, rectangle, cross
coupleralign=t, top, b, bottom, c, center
VariableCoupler ⟨psstyle⟩

\fiberbox(⟨in⟩)(⟨out⟩){⟨label⟩}
fiberboxwidth=⟨num⟩
fiberboxheight=⟨num⟩
fiberboxsize=⟨width⟩ ⟨height⟩
fiberboxsepin=⟨num⟩
fiberboxsepout=⟨num⟩
fiberboxcount=⟨N⟩x⟨M⟩

Electrical components

\eleccoupler(⟨tl⟩)(⟨bl⟩)(⟨tr⟩)(⟨br⟩){⟨label⟩}

eleccouplersize=⟨size⟩ or ⟨width⟩ ⟨height⟩
eleccouplersep=⟨num⟩
eleccouplertype=standard, directional
eleccouplerinput=left, right

\elecsynthesizer(⟨in⟩)(⟨out⟩){⟨label⟩}
synthsize=⟨size⟩ or ⟨width⟩ ⟨height⟩
synthtype=sine, pulse, sawtooth, rectangle, triangle, custom
synthshape=circle, rectangle
SynthStyle ⟨psstyle⟩

\elecmixer(⟨left⟩)(⟨right⟩)(⟨bottom⟩){⟨label⟩}
elecmixersize=⟨num⟩

Hybrid components

\optfilter[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}

filtersize=⟨num⟩
filtertype=bandpass, bandstop, lowpass, highpass
filterangle=⟨num⟩
FilterStyle ⟨psstyle⟩

\fibercollimator(⟨in⟩)(⟨A⟩)(⟨B⟩)(⟨out⟩){⟨label⟩}
fibercolsize=⟨num⟩ or ⟨width⟩ ⟨height⟩

\optdetector[⟨opt⟩](⟨in⟩)(⟨out⟩){⟨label⟩}
detsize=⟨num⟩ or ⟨width⟩ ⟨height⟩
dettype=round, diode
DetectorStyle ⟨psstyle⟩

Special nodes

\oenode{⟨node⟩}{⟨comp⟩}

namingscheme=old, new
showoptdots=true, false
compname=⟨string⟩

\oenodeRefA{⟨comp⟩}
\oenodeRefB{⟨comp⟩}
\oenodeTrefA{⟨comp⟩}
\oenodeTrefB{⟨comp⟩}
\oenodeCenter{⟨comp⟩}
\oenodeLabel{⟨comp⟩}
\oenodeExt{⟨comp⟩}
extnode=⟨refpoint⟩
extnodealign=rel, relative, abs, absolute

\oenodeIfc{⟨num⟩}{⟨comp⟩}
\oenodeIn{⟨comp⟩}
\oenodeOut{⟨comp⟩}
\oenodeRotref{⟨comp⟩}
\oenodeBeam{⟨num⟩}
\oenodeBeamUp{⟨num⟩}
\oenodeBeamLow{⟨num⟩}
\oeBeamCenter{⟨num⟩}
\oeBeamVec{⟨num⟩}
\oeBeamVecUp{⟨num⟩}
\oeBeamVecLow{⟨num⟩}
\oeBeamVecMedian{⟨num⟩}

Connecting components

\drawbeam[⟨options⟩]{⟨obj_1⟩}{⟨obj_2⟩}...

raytrace=true, false
useNA=true, false

n=⟨*code*⟩
beampos=[⟨*x*⟩]⟨*y*⟩
beamangle=⟨*pscode*⟩
beamalign=rel, relative, abs, absolute
beampathskip=⟨*num*⟩
beampathcount=⟨*num*⟩
beaminside=true, false
beaminsidefirst=true, false
beaminsidelast=true, false
allowbeaminside=true, false
forcebeaminside=true, false
startinsidecount=⟨*num*⟩
stopinsidecount=⟨*num*⟩
beamnodealign=vec, conn, vector, connection

\optplane(⟨*center*⟩)
beam=true, false
Beam ⟨*psstyle*⟩
addtoBeam=⟨*list*⟩
newBeam=⟨*list*⟩
ArrowInsideMinLength=⟨*pscode*⟩
ArrowInsideMaxLength=⟨*pscode*⟩
fade ⟨*linestyle*⟩
fadeto=white, black, transparency
fadepoints=⟨*num*⟩
fadefuncname=gauss, linear, squared, exp, custom
fadefunc=⟨*PS code*⟩

\drawwidebeam[⟨*options*⟩]{⟨*obj*$_1$⟩}{⟨*obj*$_2$⟩}...
beamwidth=⟨*pscode*⟩
beamdiv=⟨*pscode*⟩
pswarning=true, false
savebeampoints=true, false, ⟨*int*⟩
loadbeampoints=true, false, ⟨*int*⟩
savebeam=true, false, ⟨*int*⟩
loadbeam=true, false, ⟨*int*⟩
startinside=true, false
stopinside=true, false

\drawfiber[⟨*options*⟩]{⟨*obj*$_1$⟩}{⟨*obj*$_2$⟩}...
fiberalign=rel, relative, center, abs, absolute
fiberangleA=⟨*num*⟩
fiberangleB=⟨*num*⟩
startnode=auto, N, 1, 2, ...
stopnode=auto, N, 1, 2, ...
Fiber ⟨*psstyle*⟩
addtoFiber=⟨*list*⟩
newFiber=⟨*list*⟩
fiberstyle=⟨*string*⟩

\drawwire[⟨*options*⟩]{⟨*obj*$_1$⟩}{⟨*obj*$_2$⟩}...
wirealign=rel, relative, center, abs, absolute
wireangleA=⟨*num*⟩
wireangleB=⟨*num*⟩
wirestyle=⟨*string*⟩
addtoWire=⟨*list*⟩
newWire=⟨*list*⟩
Wire ⟨*psstyle*⟩
fiber=[*+]none, all, i, o, ⟨*refpoint*⟩
wire=[*+]none, all, i, o, ⟨*refpoint*⟩

\begin{optexp}...\end{optexp}
\backlayer{⟨*code*⟩}
\frontlayer{⟨*code*⟩}

Custom components

\optdipole[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
\opttripole[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}

optdipolesize=⟨*width*⟩[⟨*height*⟩]

\newOptexpDipole[⟨*fixopt*⟩]{⟨*name*⟩}{⟨*dftopt*⟩}
\newOptexpTripole[⟨*fixopt*⟩]{⟨*name*⟩}{⟨*dftopt*⟩}
\newOptexpFiberDipole[⟨*fixopt*⟩]{⟨*name*⟩}{⟨*dftopt*⟩}
\newOptexpElecDipole[⟨*fixopt*⟩]{⟨*name*⟩}{⟨*dftopt*⟩}

Additional information

showifcnodes=true, false
IfcNodeStyle ⟨*psstyle*⟩