

Projected FTIR Prices

Projected FTIR	Item	Min Price	Est. Price	Max Price	Sources	Specs
Image device	Projector	\$0.00	\$0.00	\$0.00	donated IT projector - will need optics adjustments	Donated proj. is 640x480, with some display artifacts, possibly repairable
	Mirror	\$0.00	\$2.00	\$10.00	Use of Ryan's mirror, dollar tree, or dept. store	If optics adjustments succeed, only one small mirror is needed
Capture device	IR Webcam	\$0.00	\$0.00	\$0.00	Already owned by CSCI	QuickCam Pro 4000 easily modified, works on Linux, Mac, and Windows
Illumination	IR LED's	\$0.00	\$15.00	\$50.00	Ebay or environmental lights	env.lights offers prewired strips of IR LEDs, or ebay has clusters of high-intensity LEDs. Might be able to salvage some from broken remote controls.
Surface layers	Acrylic	\$7.00	\$35.00	\$50.00	Menards - variety of sizes and thicknesses	If installed in desk, will be 15"x19", which is smaller than sheets for sale. The two pieces under most consideration are \$15 and \$33
	Compliant Surface	\$3.00	\$10.00	\$20.00	Menards or Joann Fabrics	Rolled, diluted silicone rubber (requires silicone rubber caulk, acetone/xylene, and a foam paint roller) is ideal but complicated, Sulky Solvy interfacing sheets is cheaper, easier, but less effective
	Projection surface	\$0.00	\$3.00	\$10.00	Joann Fabrics	I picked up some material at Joann for <\$2 that works well, and has a max width of 15" - works well with projector. If we use frosted acrylic (pricy) this is not needed
Surface mounting	Wood frame with groove	\$0.00	\$0.00	\$10.00	Scrap wood or Menards	I need a 2x4 that I can cut to fit the perimeter of the screen and use a table saw or router to cut a groove to support the surface.
	Reflective tape	\$3.00	\$6.00	\$10.00	Menards or Hobby Lobby	Metal stained glass tape may be cheaper and/or narrower (better), \$6 is for plenty of 2" Al. tape at Menards
Totals		\$13.00	\$71.00	\$160.00		

LCD FTIR Prices

LCD FTIR	Item	Min Price	Est. Price	Max Price	Sources	Specs
Image device	LCD panel	\$0.00	\$40.00	\$70.00	ebay or donated	Looking for an LCD that doesn't light up but that you can see an image on if you shine a light at it (backlight dead), since I have to deconstruct it anyway
	White LED's for backlight	\$5.00	\$10.00	\$20.00	ebay	
Capture device	IR Webcam	\$0.00	\$0.00	\$0.00	Already owned by CSCI	QuickCam Pro 4000 easily modified, works on Linux, Mac, and Windows
Illumination	IR LED's	\$0.00	\$15.00	\$30.00	Ebay or environ.lights	Both techniques for illumination
Surface layers	Acrylic	\$7.00	\$35.00	\$50.00	Menards - variety of sizes and thicknesses	If installed in desk, will be 15"x19", which is smaller than sheets for sale. The two pieces under most consideration are \$15 and \$33
	Compliant Surface	\$3.00	\$10.00	\$20.00	Menards or Joann Fabrics	Same two options as Proj. FTIR, but silicone is likely to be required here.
Surface mounting	Wood frame with groove	\$0.00	\$0.00	\$10.00	Scrap wood or Menards	I need a 2x4 that I can cut to fit the perimeter of the screen and use a table saw or router to cut a groove to support the surface.
	Reflective tape	\$3.00	\$6.00	\$10.00	Menards or Hobby Lobby	Metal stained glass tape may be cheaper and/or narrower (better), \$6 is for plenty of 2" Al. tape at Menards
Totals		\$18.00	\$116.00	\$210.00		

Projected DI Prices

Projected DI	Item	Min Price	Est. Price	Max Price	Sources	Specs
Image device	Projector	\$0.00	\$0.00	\$0.00	donated IT projector - will need optics adjustments	Donated proj. is 640x480, with some display artifacts, possibly repairable
	Mirror	\$0.00	\$2.00	\$10.00	Use of Ryan's mirror, dollar tree, or dept. store	If optics adjustments succeed, only one small mirror is needed
Capture device	IR Webcam	\$0.00	\$0.00	\$0.00	Already owned by CSCI	QuickCam Pro 4000 easily modified, works on Linux, Mac, and Windows
Illumination	IR LED's	\$0.00	\$15.00	\$30.00	Ebay	light strips would likely not work for this implementation, but a ~\$20 prewired "IR Illuminator" would
Surface layers	Acrylic	\$7.00	\$35.00	\$50.00	Menards - variety of sizes and thicknesses	If installed in desk, will be 15"x19", which is smaller than sheets for sale. The two pieces under most consideration are \$15 and \$33
	Projection surface	\$0.00	\$3.00	\$10.00	Joann Fabrics	I picked up some material at Joann for <\$2 that works well, and has a max width of 15" - works well with projector. If we use frosted acrylic (pricy) this is not needed
Surface mounting	Wood frame with groove	\$0.00	\$0.00	\$10.00	Scrap wood or Menards	I need a 2x4 that I can cut to fit the perimeter of the screen and use a table saw or router to cut a groove to support the surface.
	Reflective tape					Not needed with DI, though it's fine if converted from FTIR
Totals		\$7.00	\$55.00	\$110.00		

LCD LED-LP Prices

LCD LED-LP	Item	Min Price	Est. Price	Max Price	Sources	Specs
Image device	LCD panel	\$0.00	\$40.00	\$70.00	ebay or donated	Looking for an LCD that doesn't light up but that you can see an image on if you shine a light at it (backlight dead), since I have to deconstruct it anyway
	White LED's for backlight	\$5.00	\$10.00	\$20.00	ebay	
Capture device	IR Webcam	\$0.00	\$0.00	\$0.00	Already owned by CSCI	QuickCam Pro 4000 easily modified, works on Linux, Mac, and Windows
Illumination	IR LED's	\$0.00	\$20.00	\$30.00	Ebay	light strips would likely not work for this implementation
Surface layers						None needed, but acrylic between the light plane and the LCD is an option for better protection
	Screen Protection	\$0.00	\$3.00	\$10.00	Ryan or store	Optionally add another layer to LCD panel to protect from damage
Surface mounting	Wood frame with groove	\$0.00	\$0.00	\$10.00	Scrap wood or Menards	I need a 2x4 that I can cut to fit the perimeter of the screen and use a table saw or router to cut a groove for the IR LED illumination ("light plane").
Totals		\$5.00	\$73.00	\$140.00		